

THE  
**AMERICAN JOURNAL OF PHARMACY.**

MARCH, 1871.

**CAN PRACTICAL PHARMACY BE TAUGHT EFFECTIVELY BY LECTURES?**

By WILLIAM PROCTER, JR.

The time has arrived when a definite answer to this question is of serious importance to the Pharmaceutical Institutions of the United States. Slowly the public mind is being educated to the necessity of the pharmaceutical Diploma. One State after another is passing laws compelling qualification, placing impediments in the path of incompetence, and preparing the way for the final triumph of the educated pharmacist. The sparsity of Schools of Pharmacy offers a great obstacle to the universal extension of college education to apothecaries, and renders it doubly important that those who make the sacrifice to come long distances to attend lectures, and graduate, should be enabled to return freighted not only with stores of standard knowledge of the books, and the most expert practice of the shop, but with the latest ideas of the Journals not yet crystallized by pharmacopoeial adoption. In this wise the graduate should become a true missionary in propagating the valuable and the elegant in pharmacy in his practice, by attracting the attention of physicians and the public to the contrast which his dispensing makes with pre-existing imperfection in the neighborhood where he may establish.

All will agree that no amount of tuition by lectures will be equivalent to that which the earnest student receives in the dispensing shop and practical laboratory, under the personal instruction of a well-qualified pharmacist, who takes an interest in his pupil; yet such opportunities are rare.

But the question to be met is in regard to the efficiency of oral teaching, where the teacher addresses himself to a roomful of hearers,

impressing his ideas by such illustrations as will best convey his meaning to the thirsty young minds who come as to a fountain of knowledge to fill their vessels for future use. The depth of the impressions made on the minds of a score of students by the vocal announcement that *steam is a carrier of heat*, based on the property possessed by water of rendering a large quantity of caloric latent in the act of assuming the elastic state, which it relinquishes again on condensation as sensible heat, will vary with their natural capacity and previous training; but if the lecturer at the same time exhibits a flask of water in active ebullition, over a lamp, connected by an elastic tube with a flask of alcohol on the other side of the room, so as to impinge on its exterior surface below and set it to boiling, he gives ocular demonstration of what he has said. In this way all the senses recognizing size, form, color, odor, and even touch, may be called in to aid the voice in teaching.

It is essential that the preliminary lectures on manipulation should be thoroughly demonstrative and well furnished with apparatus, diagrams, models and every instrument pertaining to the shop and laboratory. The next best thing to doing it himself is for the student to see the professor perform an operation, and when important operations can be performed before the class without too serious an expenditure of time, they should be done. But when it is not possible, then much may be gained by showing the manner of using the apparatus, pointing out any difficulties that are apt to arise and how they may be avoided.

Some have questioned the propriety of giving preliminary lectures on manipulation, believing that apparatus and manipulation should be explained *pari passu* with the preparations requiring them; but this is certainly a mistake as regards the leading elementary processes, such as comminution, filtration, the generation and applications of heat, the modes of solution, evaporation, distillation and sublimation, etc. If the teacher has been fortunate in conveying his meaning, these preliminary lectures will have laid the groundwork for his subsequent teaching, so that he can use the verbs percolate, digest, distil, filter, sublime, neutralize, fuse, etc., without fear of being misunderstood.

Teachers differ in their views of classification and arrangement in Pharmacy, as well as in regard to its importance. Some prefer the artificial grouping in classes of similar preparations, as extracts, tinctures, pills, distilled waters, etc., while others prefer a systematic

AM. JOUR. PHARM.  
March 1, 1871.

## *On Practical Pharmacy.*



arrangement, based on a botanical alliance of plants yielding drugs, all the simple preparations of each drug being together. The most simple plan is that of the Pharmacopœia. The most rational, and that which appeals most forcibly to the reflective mind, is that of groups based on the similarity of active principles, the preparations of each drug being together. Thus, the starches, the gums, the saccharine drugs, the acid fruits and their products, the principal vegetable acids, the alkaloids, the neutral principles, the fixed oils, the volatile oils, the astringents, etc.

We hold that the lecturer on Pharmacy should exhibit a fair specimen of each drug the preparations of which he is speaking about, and in important cases deteriorated samples, not to trench on *Materia Medica*, but to serve as a practical text in his remarks upon preparations. He should have the powder of the drug and each of its official preparations when these are at all important. When the drug is much employed in infusion or decoction, these preparations should be at hand, as the infusion of digitalis or the decoction of cinchona, so as to point out their peculiarities. Before speaking of the preparations of a drug, its proximate constitution should always be stated, and when several principles have been isolated for medical use, the mode of preparing these should be first dwelt upon. This acquaints the student with the nature of the principles entering the preparations discussed, and the precautions necessary to insure their solution or to avoid their injury.

Where preparations are liable to deteriorate by age, it is well to have samples for illustration, a point easy to accomplish after several years of experience, and in relation to tinctures, extracts, syrups and the volatile and fixed oils, a valuable museum will soon accumulate, illustrating some curious points in relation to the action of light, oxygen, and eremacausis, together with the influence of insects and cryptogamic vegetation.

It remains to say a few words in regard to the manner of treating the subject experimentally, so as to carry out the ideas above stated. In chemical preparations requiring distillation or involving the condensation of gases, like the ethers, chloroform, oil of wine, water and spirit of ammonia, the dehydration and rectification of alcohol, the preparation of the oils of cloves, copaiba, cubebs and the distilled waters and spirits, all may be shown without difficulty and with safety by suitable preliminary preparation and the help of an assistant in a few

cases. The Pharmacopœia processes for hydrocyanic, valerianic and benzoic acids may be performed by starting the processes before the lecture, without materially wasting the professor's hour.

It is quite possible, by mixing powdered galls with ether and moisture beforehand, to express the liquid tannin, and dessicate it on tin plates before the class in a very few minutes, so as to produce good commercial tannin. There is no difficulty in making collodion cotton, washing and drying it by aid of alcohol, and dissolving it in ether, while describing the process and substances.

The rapid preparation of hydrated sesquioxide of iron, fit for an antidote, should be shown to encourage the student to do it dexterously. The processes for many metallic and other chemical preparations may be partially illustrated, but as a general rule the time of the lecturer is better spent in pointing out any difficulties requiring precautions than in attempting to go further, in all cases when possible speaking from his own knowledge.

The processes for the more important alkaloids may, by exhibiting them at different stages, be well explained to a class, but it involves much time and careful preparation. It is also quite proper to give the demonstrative tests of purity, and of recognition as well, though this is usually the work of the *Materia Medica* professor.

In regard to vegetable drugs, their relation to solvents can be easily demonstrated by percolation, and many of the more important should be the subject of practical experiments to prove that these solvents effectually remove the essential constituents. It is an excellent plan to exhibit as many as possible of the important constituents of drugs, to make the remarks more impressive. This hint especially applies to such drugs as jalap, scammony, rhubarb, cinchona, ipecac, opium, aloes, cantharis, colocynth, hyoscyamus, nux vomica, etc.

In his lectures on preparations like mixtures, pills, liniments, mucilages, suppositories, ointments, etc., the professor will have a wide scope for interesting suggestions and cautions bearing on extemporaneous pharmacy, which should never be lost sight of in every step of the course. As an instance of what we mean, let the subject be gum Arabic in its relation to pharmacy. He might say that it is a lime salt of arabic acid (which he proves by means of oxalate of ammonia,) that it is very soluble in water, and insoluble in alcohol, ether, chloroform, benzin, turpentine, and all the volatile and fixed oils, precipitable by subacetate but not by neutral acetate of lead, and in strong solution



is coagulated by borax and perchloride or sulphate of iron. When an alkaline carbonate is dissolved in clear mucilage, in mixtures, it causes cloudiness and gradually precipitates the lime as carbonate, and when borax or chloride or persulphate of iron are mixed with mucilage it must be dilute to prevent coagulation by these salts. Also when the emollient qualities of mucilage are needed in union with a lead salt, the neutral acetate and not the subacetate should be employed.

Finally, it should be remembered that among the class are always individuals whose opportunities for practice are very limited, and who, by merely seeing a plaster spread, a suppository moulded, or an emulsion made, would be far more permanently benefitted, than if merely told how to do these simple but important operations.

#### COMPOUND SYRUP OF SQUILLS, SYRUP OF SENEKA AND SYRUP OF IPECACUANHA.

BY J. C. WHARTON.

The tendency of some officinal syrups to ferment is strikingly manifested by the three above named, and, although the present formulæ for their preparation are improvements upon older ones, there are still serious difficulties in following implicitly the directions laid down in the U. S. Dispensatory. As a consequence, there are various inequalities in the resulting syrups, and, as I believe, fermentation is sometimes actually promoted by the tedious and lengthy proceedings required.

It will be sufficient to offer as an instance the compound syrup of squill. As it is not necessary to give the formula in detailed proportions, the reader is referred to the U. S. Dispensatory, where it will be seen that after a percolated tincture of three pints is obtained the directions read: "*Boil this for a few minutes, evaporate it by means of a water-bath to a pint, add six fluidounces of boiling water, and filter. Dissolve the sugar in the filtered liquid, and, having heated the solution to the boiling point, strain it while hot. Then dissolve the tartrate of antimony and potassa in the solution while still hot, and add sufficient boiling water through the strainer to make it measure three pints. Lastly, mix the whole thoroughly together.*"

In following these directions as strictly as possible I have almost invariably found that a large amount of albuminous or "pectin-like" matter was deposited, and in fact this is the stated design of raising

the liquid to the boiling point. Here arises the chief difficulty, in my opinion; at any rate I have found it to be a great one, for, in attempting to remove this deposit by filtration, especially if a considerable quantity of liquid is prepared, the filter is soon clogged by the *gummy* matter, and the liquid filters very slowly. I have known filtration to *cease* towards the close of the operation. In such a case the best that can be done is to provide a new filter and empty the old one into it, expressing it to avoid loss as much as possible. This is tedious and wasteful of the virtues of the drug. On one occasion I prepared a quantity of the tincture, and such was the tardiness of filtration that *several days* were occupied in completing it. Towards the end I noticed a few patches of a mouldy growth that had formed on the surface of the albuminous matter in the filter, and by smelling it perceived that *the liquid was spoiled before the syrup was made*. The failure was suggestive, and I concluded that if a few days were enough to *spoil the liquid* a few hours time might injure it, and, in fact, the *germs of fermentation* might begin to work as soon as the liquid was cold, since the protective agency of alcohol was gone.

Reasoning as above, I resorted to a method of filtration often used when a difficult precipitate is to be removed, namely, rubbing the muddy liquid with magnesia. In this case it acted with the double advantage of mingling its particles with the albuminous matter, thus facilitating filtration and neutralizing any free acid that might be present from incipient fermentation. The result was very satisfactory. Filtration was greatly hastened, and the syrup produced was not muddy looking or translucent, as is generally the case, but was beautifully transparent. It was kept a year without fermenting, though almost daily in use.

I have since tried the same method of filtration with syrup of ipecacuanha and syrup of seneka, with like results.

There is a point that may seem objectionable in using magnesia or its carbonate as above, and it has been duly considered before offering these suggestions. It is this: Magnesia is *alkaline* in its reactions, and as the active principle of seneka is considered to be *acid* (polygalic), it would seem that they are incompatible, but as they are both feeble in their affinities and as filtration proceeds rapidly there is practically no objection to mixing them. There is, it is true, a very slight escape of carbonic acid when the carbonate of magnesia is rubbed with the concentrated liquid, but it may be due to a small

amount of free acid of a different character, and even though a little polygalic acid should be removed by the magnesia the amount is so trivial as to be of no importance, and the objection is more than counterbalanced by the complete removal of the albuminous and pectinous deposit which generate fermentation, and would soon decompose more polygalic acid than the magnesia removes.

I therefore submit the following formulæ, adhering as closely to the U. S. Dispensatory as practicable, and would remark that the use of carbonate of magnesia is sanctioned by that authority in the case of the active principle of ipecacuanha, which the reader will see by referring to the method of preparing *impure emetia*, U. S. D., under the article "*Ipecacuanha*:"

*Syrupus Scillæ Compositus.*

Take of Squill, in moderately coarse powder, four troyounces.  
Seneka, in moderately fine powder, each four troyounces.  
Tartrate of Antimony and Potassa, forty-eight grains.  
Sugar (refined) in coarse powder, forty-two troyounces.  
Diluted Alcohol, a sufficient quantity.  
Water, each a sufficient quantity.  
Carbonate of Magnesia, sixty grains.

Mix the squill and seneka, and, having moistened the mixture with half a pint of diluted alcohol, allow it to stand for an hour. Then transfer it to a conical percolator and pour diluted alcohol upon it until three pints of tincture have passed. Boil this for a few minutes, evaporate it by means of a water-bath to a pint, add six fluidounces of boiling water, rub the liquid with the carbonate of magnesia in a mortar till thoroughly mixed, filter, and add through the filter sufficient warm water to make the filtrate measure twenty-two fluidounces. Dissolve the sugar in the filtered liquid, and, having heated the solution to the boiling point, strain it while hot. Then dissolve the tartrate of antimony and potassa in the solution while still hot, and add sufficient boiling water, through the strainer, to make it measure three pints when cold. Lastly, mix the whole thoroughly together.

*Syrupus Senegæ.*

Take of Seneka, in moderately fine powder, four troyounces.  
Sugar (refined) in coarse powder, fifteen troyounces.  
Diluted Alcohol, two pints.  
Water, a sufficient quantity.  
Carbonate of Magnesia, thirty grains.

Moisten the seneka with two fluidounces of the diluted alcohol, then transfer it to a conical percolator and gradually pour upon it the remainder of the diluted alcohol. When the tincture has ceased to pass evaporate it by means of a water-bath, at a temperature not exceeding 160°, to half a pint. Rub it with the carbonate of magnesia in a mortar till thoroughly mixed, filter and add sufficient warm water through the filter to make the filtrate measure half a pint, and, having added the sugar, mix well together, and note accurately the measure of the mixture while cold; then dissolve the sugar with the aid of a gentle heat, strain the solution while hot, add sufficient warm water through the strainer to bring the syrup, when cold, to the previously noted measurement, and mix them thoroughly.

*Syrupus Ipecacuanhæ.*

(Modified from former editions of the U. S. P.)

Take of Ipecacuanha, in fine powder,	<i>two troyounces.</i>
Diluted Alcohol,	
Water, each	<i>a sufficient quantity.</i>
Sugar (refined) in coarse powder,	<i>twenty-nine troyounces.</i>
Carbonate of Magnesia,	<i>forty-five grains.</i>

Moisten the ipecacuanha with one fluidounce of the diluted alcohol, let it stand for twenty-four hours. Then transfer it to a conical percolator and gradually pour upon it diluted alcohol until one pint of tincture has passed. Evaporate this by means of a water-bath to six fluidounces, add ten fluidounces of warm water, and, having rubbed it thoroughly with the carbonate of magnesia in a mortar, filter, and add sufficient warm water through the filter to make the filtrate measure one pint; then add the sugar, and dissolve it with the aid of a gentle heat, and, having strained the hot syrup, add sufficient warm water, through the strainer, to make it measure two pints when cold.

It will be seen that the chief point of difference between the two first formulæ above given and the U. S. P. requirements is the filtration of the evaporated tinctures through carbonate of magnesia instead of paper only; but I would call the attention of the authors and revisers of both the Pharmacopœia and Dispensatory to the lack of explicit directions in many of the formulæ for syrups, from which I, with many others, have suffered loss and trouble. The difficulty is mainly in the want of full and accurate directions in regard to the various measurements. For example, the closing directions in the



formula for compound syrup of squill read thus: "*Add sufficient boiling water, through the strainer to make it (the hot syrup) measure three pints*" (while hot?) In view of the tartar emetic, the *design* of the formula must be to make the syrup measure three pints when cold, but a fair interpretation of the *directions* cannot mean that. Now it is plain that three pints of *hot* syrup will not, upon cooling, be three pints of *cold* syrup, admitting that no evaporation takes place in the act; but most commonly a considerable evaporation will take place during the process, and of necessity a crystallization of sugar takes place. The fault is even worse in the formula for syrup of seneka. The directions read: "*Filter, and, having added the sugar, dissolve it with the aid of a gentle heat and strain the solution while hot.*" No account is taken of the loss of liquid in filtering, nor of evaporation in dissolving the sugar. If the directions are followed *precisely*, in such cases, crystallization will *inevitably* take place, even if the amount of sugar prescribed is not a little too great, as I am of opinion it is in the two first of the syrups herein discussed. I believe that in practice *twenty-nine troyounces* would be found to answer as well as *thirty troyounces*, or a proportional reduction of other quantities.

Nashville, Tenn., Jany. 24, 1871.

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#### PRESERVATION OF VACCINE CRUSTS.

By DAVID STEWART, M. D.

Vaccine lymph may be preserved during all the summer months, in any climate, by the following expedient, which I devised several years since:—Immerse them in mercury, and keep the package in a cool cellar, or ice-house or well. No moisture can reach them, although the package is placed beneath the surface of water in the well, or sunk to the bottom thereof. Moreover, they will be dried more thoroughly when deeply imbedded in water, for manifest reasons, and not only protected from insects, but the peculiar animal, which forms at their expense, (invariably when they are otherwise stored away,) and equals them in size ultimately, will not occur. In 1868, I preserved them thus successfully, in my cellar, from the spring until autumn, by attaching a slice of cork to a thread, which facilitates its removal from a tube vial or "test-tube," when forced down and confined by its own elasticity to the lower extremity; this slice of cork I marked



with the date, &c., and then dropped upon it some melted beeswax, one drop of which is sufficient to attach the crust to one side of the disc of cork which suspends it, clear of the glass at the bottom, under a stratum of mercury which may be subsequently introduced until the tube is filled; but one inch of mercury I prefer, although much less may answer, provided the cork is covered therewith; especially if (by the mouth) the pressure of the atmosphere is partly removed (sucked out) from its surface momentarily, as this is *more* than equivalent to the effect that would otherwise result if even twenty (20) inches of mercury were imposed. In other words, the vaccine is enclosed in a *quasi* Torricellian vacuum; and, moreover, any air on its surface is expanded and escapes above the stratum of mercury. Upon this principle, delicate anatomical preparations may be kept during the summer months in their original perfection, provided eremecausis has not commenced.

Port Penn, Delaware, June 9th, 1870.

#### TINCTURE OF NUX VOMICA.

By J. B. MOORE.

The tough and corneous character of *nux vomica*, and the obstacle this offers to the solution of its active constituents, render it one of the most difficult substances in the *Materia Medica* to exhaust with a limited quantity of menstruum. It is, therefore, important that the greatest care be exercised in the preparation of the tincture and all the pharmaceutical preparations of the drug.

The U. S. Pharmacopœia directs *fine* powder, No. 60, to be employed in making the tincture, and gives the following directions for its preparation:—"Mix the powder with a pint of alcohol, and digest for twenty-four hours, in a close vessel, with a gentle heat; then transfer the mixture to a cylindrical percolator, and gradually pour alcohol upon it until two pints of tincture are obtained."

Having, in common with many of my brethren in the profession, had frequent difficulty in thoroughly exhausting the drug and obtaining a satisfactory preparation when complying with the above directions, I was induced about two years ago to institute a series of experiments, with the view of so amending the official formula and process that a more uniform and reliable tincture might be made, and, after many experiments with various modes of manipulation,

and with powders of different degrees of fineness, I became convinced that a finer powder than is directed in the official formula was necessary to insure the perfect exhaustion of the drug, and that some change in the process was also required. As the result of my efforts, I offer the following modification of the official process as affording the most satisfactory results :

R Pulv. Nux Vomica, No. 80,       $\text{ʒviiij}$  Troy.  
Alcohol,      a sufficient quantity.

Mix the powder with one and a half pints of alcohol, and digest for twenty-four hours, in a close vessel, at a temperature of  $120^{\circ}$ , with occasional agitation ; then strain through muslin with strong expression, and rub the residue through a No. 20 sieve ; then pack it firmly in a glass cylindrical percolator, and gradually pour upon it the expressed liquid, and when it has all been absorbed, continue the percolation with alcohol until two pints of tincture are obtained.

Instead of digesting the drug with only a pint of alcohol, as directed by the Pharmacopœia, I use a pint and a half, as it is desirable to secure the solvent action of as much of the menstruum as is possible during the digestion.

I also direct the mixture to be expressed at the completion of the digestion, as the residue can then be properly packed for percolation. This is of paramount importance to the success of the operation, and is much better than pouring the mixture into the percolator and allowing it to settle and adjust itself, as in the official formula, because in doing so the homogeneous condition of the mass is disturbed by the partial separation of the finer and coarser particles.

The residuum should be packed so firmly in the percolator that, when percolation commences, the tincture will not pass at a faster rate than from five to eight drops per minute.

If the above directions are carefully complied with a good and reliable preparation will result. When the process is completed, the dregs in the percolator will be found to be tasteless or nearly so.

The almost insuperable difficulties attending the reduction of nux vomica to a very fine powder, with the facilities afforded by any ordinary retail drug store, forbid the idea of any pharmacist attempting to powder the drug for himself, consequently, nearly all are compelled to rely upon the wholesale market for their supply ; therefore, I think that our wholesale druggists should keep constantly on hand nux vomica in *very fine* powder. I presume it is quite a difficult

matter to reduce it to so fine a state of division, even by the aid of the appliances of the best arranged drug powdering establishments, yet, by proper treatment, it can be done.

At the time I was engaged with my experiments I found it impossible to obtain any powdered nux vomica in this market that even came up to the requirements of the Pharmacopœia, and to procure the very fine (No. 80) powder I desired, I was obliged to send to Dr. Squibb, in Brooklyn.

There was but one or two of our wholesale drug houses that had any powder finer than from No. 30 to No. 40. Now, as pharmacists have to depend almost exclusively upon the commercial powder to prepare their tincture from, this would seem to indicate that it is nearly all made from powder entirely too coarse, and must necessarily often be of very deficient strength. To this cause may be attributed the frequent failure of physicians in deriving the desired therapeutic effects from the administration of the tincture. It is not uncommon to hear medical men remark that they have lost confidence in the virtues of tincture of nux vomica, and many have ceased to employ it in their practice. But I believe that if it be carefully and properly prepared it is as efficient and reliable a preparation of the drug as any that is made.

*Phila., Pa., Feb., 1871.*

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#### ON THE DIGESTIVE POWER OF COMMERCIAL PEPSINS.

By J. S. HAWLEY, M. D.

To the Editor of the American Journal of Pharmacy:

In a recent number of your Journal an article appeared, by E. Scheffer, of Louisville, Ky., which not only impeaches my veracity, but is likely to do me serious harm pecuniarily.

This article contains an account of an experiment to test the digestive power of several varieties of pepsin, among others one made by the author of the article and one made by myself.

Of Mr. Scheffer's pepsin I have no knowledge, and am not disposed at present to question his statements concerning it. But in respect to the other varieties, I have made frequent tests of their strength, some of which I have published. To vindicate the truth of my statements I have performed a digestive test, following the method pursued by Mr. Scheffer, and will thank you to do me the justice to give

it a place in your Journal. In doing this, I wish it to be understood that no unfavorable reflections are intended towards Mr. Scheffer. On the contrary, his article bears intrinsic evidence of candor and scientific accuracy. It is my belief that he unfortunately procured a damaged sample of my pepsin, as he admits he did of Boudault's on a former occasion.

My only object in this communication is to set myself right before the professions of medicine and pharmacy.

In this test the same varieties of pepsin are used and the same method pursued as by Mr. Scheffer, except drying the residue, which has been done to secure greater accuracy of result.

In each of four suitable bottles were placed sixty grains of coagulated albumen (white of egg), one fluidounce of water, five drops of muriatic acid, and five grains of Boudault's, Grimault's, Houghton's, and Hawley's pepsin respectively.

These were kept in the same water-bath, at a temperature of 98° to 102° Far., and frequently agitated during the space of four hours. At the end of this time the undigested portions were removed and drained of moisture.

The following appearances were presented by the residua respectively:

That digested in Houghton's pepsin appeared unaltered in form, color and quantity, and soon became dry as before digestion.

That digested in Grimault's had lost something of its opacity, the angles were rounded, the quantity sensibly diminished, and presented an appearance of increased softness and moisture.

That digested in Boudault's possessed a slightly translucent appearance, the angles of the remaining pieces entirely destroyed and the quantity decidedly diminished, wet and inclined to remain so.

That digested in Hawley's pepsin had become nearly translucent and amorphous, the quantity much more diminished than the last and very wet, evidently considerable peptone adhering to the undigested portions.

These residua, together with sixty grains of coagulated albumen, which had been subjected to no digestion, were placed separately upon clean earthen plates and dessicated to dryness.

This dessication was employed to avoid the difference of weight due to the difference of capacity for retaining water possessed by substances in different stages of digestion.

After complete dessication the residua weighed as follows:

The albumen which had undergone no digestion weighed	7½ grs.
That digested in Houghton's,	7½ "
" Grimault's,	5 "
" Boudault's,	2 "
" Hawley's,	1 "

Now since it appears that one grain of dry is equal to eight grains of fresh coagulated albumen, it follows that

Houghton's pepsin is entirely negative, or digested nothing.	
Grimault's digested	20 grs.
Boudault's "	44 "
Hawley's "	52 "
One grain of Grimault's pepsin digested	4 grs.
" Boudault's "	8½ "
" Hawley's "	10½ "
Grimault's digested of the albumen,	$\frac{24}{80}$
Boudault's "	$\frac{44}{80}$
Hawley's "	$\frac{52}{80}$

This last comparison between Boudault's and Hawley's pepsins agrees, within a very small fraction, with my digestive test upon fresh beef, made more than a year ago, and published in my circular. This circumstance is somewhat corroborative of the correctness of both tests.

J. S. HAWLEY, M. D.

Brooklyn, N. Y., Feb. 18th, 1871.

#### REVIEW.

*Taschenbuch der Geheimmittellehre. Eine kritische Uebersicht aller bis jetzt untersuchten Geheimmittel. Herausgegeben, von Dr. G. C. WITTSTEIN. 3e vermehrte Auflage. Nördlingen, 1871.*

[Handbook of Secret Medicines. A critical review of all the secret medicines analyzed until the present time. Third enlarged edition.]

The fact, that in about four years this little work has reached its third edition, is sufficient proof that the labors of the author have been appreciated. Wittstein is an unrelenting enemy of the nefarious industry in nostrums. Having himself analyzed quite a number, or caused them to be examined by his pupils and others, he was peculiarly fitted for this critical compilation, which embraces also the labors



in this direction of Hager, Jacobsen, Casselmann and many others. The book confines itself, for obvious reasons, to those secret preparations offered for sale in Germany; but we find among them quite a number which are more or less known in this country and have their birthplace in Germany, Switzerland, Italy, France or England; even a number of American origin are "ventilated" therein, the proprietors of which had "enterprize" enough to introduce them on the old continent.

The articles are arranged in alphabetical order, and a short history is in nearly all cases attached, giving the originator or manufacturer, the diseases which it pretends to cure, a description of the physical properties and style in which it is put up, the retail price, the pretended constituents, the names of the analysts, the true composition, and the actual retail value, if made in a respectable apothecary's store. We extract the formulas for a few articles only, which may be of some interest to our readers:

*Coca Pills*, by Sampson, New York. According to Hager and Jacobsen, composed of powdered coca and extract of coca in about equal quantities; value about one-fourth of price.

*Eau de Cythère*, a hair color restorer, consists of 4 chloride of lead, 8, hyposulphite of soda, 88 water. A similar composition has *Eau de fées*, which, a couple of years ago, was introduced here. The writer found in a sample also some alkalies, earths and traces of nitric acid, originating probably in the spring or pump water used. Hager and Jacobsen give the following formula: hyposulphite of lead 14, hyposulphite of soda 3, glycerin 7, water 88 parts.

*Granular Effervescent Citrate of Magnesia*, by Bishop, of London, consists merely of bicarbonate of soda and tartaric acid.

*Pommade des Châtelaines*, a hair invigorator, consists of benzoinated lard and some volatile oils.

*Hamburg Tea*, by Frese & Co., of Hamburg: Senna 8, manna 3, coriander 1.

*Magnesian Aperient*, by Moxon, of England, is, according to Siller, anhydrous sulphate of magnesia 31, carbonate of magnesia 14, bicarbonate of soda 30, tartaric acid 25 parts.

*Lait de Perles*, according to Dragendorff, 1 white lead, 7 rose water.

*Swedish Essence of Life* is made also in this country, under various names. As usually made by apothecaries, it is a tincture prepared from 4 aloes, 1 agaric, 1 rhubarb, 1 saffron, 1 zedoary, 1 gentian, 1 myrrh, 1 theriac, with 100 to 120 dilute alcohol. The secret medicine manufacturers usually substitute cheaper articles for the high priced saffron and rhubarb.

*Hoff's Extract of Malt* has been repeatedly altered in its composition. It is now a good beer, of a pretty constant alcoholic strength of 3 per ct., but varying in the amount of extract between 5.3 and 10 per ct. The beer sometimes contains an infusion of a bitter herb (buckbean, blessed thistle) and of

the bark of *Rhamnus frangula*. According to one original receipt, beer was mixed with a small quantity of a strong infusion of marsh mallow root, coriander, staranise, and grains of paradise, and with some simple syrup, glycerin, oil of lemon, oil of orange and beer coloring (caramel). The consumers can make it for, at most, one-sixth of its price.

*Zimmermann's Extract of Malt*, which, like the former, comes likewise from Berlin, is similar in composition.

*Matico Injection*, by Grimault, of Paris, for gonorrhœa, is made, according to Rjoerklund, by dissolving 4 grains sulphate of copper in 8 oz. infusion of matico (from  $\frac{1}{2}$  oz.)

*Syrup of Horseradish*, by Grimault. Hager gives the following directions: 50 p. each of fresh scurvygrass, buckbean, and watercress, 60 of horseradish, 40 of fresh orange berries, are infused with 3 cinnamon in 50 p. white wine, and after a day expressed; 250 p. sugar are dissolved in the filtrate.

*Iodinized Syrup of Horseradish*, by Grimault, contains 10 iodine and 5 potassium iodide in 8000 of the former.

*Sirop de Lait Iodique*, by Bouyer, of Paris. 200 cows' milk, 60 cane sugar, a little soda, and 1.6 of potassium iodide, are evaporated to 100 parts.

*Myrrhine*, by J. B. George, of Paris, for the preservation of the teeth: glycerin 38, myrrh 7, arrowroot 5, chalk 54, oil of cinnamon 1 part.

*New York Pills*, by Sampson, of New York. The  $1\frac{1}{2}$  grain pills consist of powdered coca 25, extract of coca 30, powdered iron 35 parts.

*Opiate pour les Dents*, by Pinaud. Syrup 70, chalk 21, gypsum  $7\frac{1}{2}$ , magnesia  $1\frac{1}{2}$ , colored with anilin red, containing arsenic, and flavored with oil of cloves and of spearmint.

*Brandreth's Pills* contain resin of podophyllum, inspissated juice of poke berries, saffron, cloves, oil of peppermint.

*Holloway's Pills* are composed of aloe, myrrh, and saffron.

*Morrison's Pills*,  $2\frac{1}{2}$  grains each, consist of aloe, cream of tartar and colocynth; another kind contains the same ingredients, besides gamboge.

*Radway's Ready Relief*, according to Peckolt, is an ethereal tincture of capsicum, with alcohol and camphor.

*Radway's Renovating Resolvent*, a vinous tincture of ginger and cardamom sweetened with sugar. (Hager and Jacobsen.)

*Poudre Hémostatique Végétal*, by Bonnatour, consists of 4 rosin, 1 gum Arabic, 1 wood charcoal.

*Poudre Unique*, by Godernaux, of Paris, lauded as a specific against epilepsy, is impure calomel, leaving when heated a slight reddish residue.

*Oil of Horsechestnuts*, by E. Genevoix, of Paris, is not the oil of the horsechestnuts, but another non-drying oil, altered by heat so that it has acquired a darker color, a pungent odor and acrid taste. (Wittstein.)

The above quotations may suffice to show the nature of the little volume, which we heartily recommend to those who desire to inform themselves of the nature of numerous panaceas, heralded as specifics for all ailments which human flesh is heir to.

J. M. MAISCH.

CHLORAL:

*Hydrate—Alcoholate—Tests—Therapeutical Value—Pharmaceutical Preparations.*

By ALFRED H. MASON.

Read at a meeting of the Liverpool Chemists' Association, held December 22d, 1870.

The principal object of this paper is to show that the hydrate of chloral of commerce is not all pure hydrate of chloral, but that other compounds have been put upon the market. I have examined samples, obtained from different sources, varying very seriously in the proportion of chloroform they produce upon decomposition with alkaline reagents, and I feel it a moral duty to pharmacutists to advise them of these facts. When it is considered that one agent alone in London has disposed of twenty-two thousand pounds' weight\* during the past twelve months, it is certainly high time for us to be alive to the necessity of dispensing a guaranteed article.

Chloral,  $C_2Cl_3HO$ , is formed by the prolonged action of chlorine upon absolute alcohol.† To prepare it, the current of chlorine must be kept up as long as the hydrochloric acid gas continues to escape, and the product is to be agitated with three times its volume of concentrated sulphuric acid. On gently warming this mixture in a water-bath, the impure chloral separates as an oily liquid, which floats on the surface of the acid; it is purified by distillation from fresh sulphuric acid, and afterwards from a small quantity of quicklime, which must be kept completely covered by the liquid until the end of the operation. The chemical reactions which take place in its formation were described in a valuable paper by Mr. Henry Sugden Evans, of London, last session.

Chloral is a thin, oily, colorless liquid, of peculiar and penetrating odor, which excites tears, and it has but little taste.

Liebreich says,‡ if chloral be left in contact with concentrated sulphuric acid, it is transformed into polymeric insoluble chloral; this body is more easily purified, since it is not soluble in alkalies or acids, and it may be treated a long time with these substances without decomposing. Warm this insoluble chloral, and it converts itself into

\* This includes both kinds of hydrate of chloral, as distinguished now by the agents themselves,—guaranteed and unguaranteed.

† Fownes' "Manual of Chemistry," p. 813. 1868.

‡ "L'Hydrate de Chloral," O. Liebreich, 1870, p. 15.

soluble chloral. The sp. gr. of soluble chloral is 1.502. By degrees it thickens, and is sometimes transformed suddenly into soluble chloral, evolving a large amount of heat.

When we mix anhydrous chloral with water, we obtain in a short time acicular crystals of hydrate, of chloral, this body being distinguished from ordinary chloral by containing one molecule of water. Its formula is  $C_2Cl_3HO + H_2O$ .

This method is the one alone authorized by Dr. Liebreich, of Berlin,\* who took out a patent in July, 1869, for the sole use for anæsthetic purposes of chloral, hydrate of chloral, and trichloroacetic acid, ( $C_2HCl_3O_2$ ).

The physiological and therapeutical experiments made by Liebreich led to the introduction of this product as a medicinal agent, and since he has published his formula,† with the results of his experiments, I think we should fix upon his method as the OFFICIAL one. The superiority of the hydrate of chloral manufactured under his supervision I shall prove to you (i. e., *if the larger proportion of chloroform produced by alkaline reagents from the chloral compound employed is to be the test, which is, I think, self-evident.*) He tells us that numerous experiments show that this method is far the most trustworthy.

Chloral is obtained in other ways; for instance, by the method of Stædeler, from starch, by distillation with hydrochloric acid and dioxide of manganese, formic acid, carbonic acid and other bodies accompanying it; but Liebreich states he has made experiments with this preparation and finds it is not to be depended upon in its action, from the great difficulty of preventing the formation of other compounds, especially chlorides of carbon, which serve to contaminate the chloral and render its administration dangerous.

It was contended by M. J. Personne‡ that the hydrate of chloral prescribed by M. Roussin as pure, was nothing more than a compound of chloral and alcohol. Differences being observed in the physical properties of the preparation made by Liebreich and that made by Roussin, it was found that they were two entirely distinct compounds, which was fully confirmed by an appeal to analysis. Theoretically,

\* "L'Hydrate de Chloral." Oscar Liebreich.

† *Idem.*

‡ *Journal de Pharmacie et de Chimie.*

hydrate of chloral should contain 64·85 per cent. of chlorine. M. Personne found that the preparation he had made contained 63·79 per cent., whilst a sample of that made by M. Roussin yielded only 54·89 per cent. Following this indication, Personne endeavored to ascertain by experiments whether the hydrate of chloral prepared by Roussin did, or did not, contain alcohol. The results were very satisfactory in proving the presence of this compound. Further, by combining anhydrous chloral and absolute alcohol in proper proportions, Personne was enabled to prepare synthetically a substance having properties entirely similar to those of the supposed hydrate of chloral prepared by Roussin.

It is this preparation, alcoholate of chloral, represented by  $C_2Cl_3HO + C_2H_6O$ , that we meet with in commerce, also hydrated alcoholate of chloral, which are not to be trusted as therapeutic agents according to the system laid down by Liebreich.

At a meeting of the Pharmaceutical Society, Mr. John Williams suggested that an alkaline reagent would show the percentage of chloroform the chloral preparation would produce. Mr. Charles Umney has also made some very valuable experiments, and instituted what is now known to pharmacists as "the ammonia process" for testing hydrate of chloral. The mode of operating, and the results of his experiments, are published in the *Pharmaceutical Journal*.

I find that hydrate of chloral is insoluble in cold chloroform, tetrachloride of carbon, turpentine and bisulphide of carbon, but on the application of heat, solution is effected. The hydrate is, however, perfectly soluble in cold water, ether (·735) and absolute alcohol (·805); after the application of heat, and upon cooling, the hydrate separates in beautiful crystals, generally needles, but from bisulphide of carbon in prisms. True hydrate of chloral is not acted upon by nitrate of silver or by acids.

Alcoholate of chloral is perfectly *soluble* in chloroform, ether, tetrachloride of carbon, absolute alcohol, turpentine, and bisulphide of carbon, and upon heating does not present any change, nor can I produce crystals from these alcoholic solutions. Why, I do not quite understand. In cold water alcoholate of chloral is nearly insoluble; and I venture to suggest this as a *simple* test for these two forms of chloral compound.

If twenty grains of the chloral compound is *soluble* in thirty minims of cold chloroform, it is not a hydrate; on the other hand, if the same



Sample No.	Manufacturers, or by whom supplied.	Boiling Point.	Chloro- form Layer.	Percentage of Chloro- form produced from 500 grains of the Chloral com- pound.	General Remarks.
1	Hydrate of Chloral, prepared under the supervision of Dr. Liebreich, by Dr. P. Marius, and Dr. P. Mendelssohn Bar- tholdy, of Berlin.	Centigr. 97°	Grains. 240	357.6 grains, or 71 p. c. (71.5)	A crystalline cake, white, easily powdered, with an agreeable melon odor, slightly pungent. Soluble in water, ether, alcohol; insoluble in chloroform, carbon tetrachlor.; partially soluble in turpentine, and bisulph. carbon with- out heat. With heat, dissolves and, on cooling, needle crystals are formed, except in the case of bisulph. carb., which seems, as it were, to gelatinize it. A white powder. Results same as above.
2		96.4°	240	357.6 grains, or 71 p. c. (71.5)	
3		98°	235	351.7 grains, or 70 p. c. (70.3)	Bright rhomboid crystals, melon smell, more pungent. Results as above.
4	Manufactured by Messrs. De Hane and Co., Hanover. Cake.	100.5°	190	283.1 grains, or 57 p. c. (56.6)	Semi-transparent crystalline cake, rather hard, slightly deliquescent, much more pungent smell, caustic. Soluble in water, ether (with slight efferves- cence), alcohol; insoluble in chloroform, carbon tetrachlor., bisulph. carbon, and turpentine (slightly), without heat; with heat, soluble in all, and upon cooling crystallizes.
5	From Messrs. T. Morson and Son, London. Crystal.	105°	190	283.1 grains, or 57 p. c. (56.6)	Thin, deliquescent, colorless, crystalline plates (in appearance resembling potass. chlor.), slightly pungent, melon smell. Soluble in water (with argen- tit. shows slight opalescence), ether, alcohol; insoluble in chloroform, carb. tetrachlor., turpentine, bisulph. carb., etc.
6	Manufactured by Messrs. Dunn, Squire and Co., Lon- don. Cake.	100°	190	283.1 grains, or 57 p. c. (56.6)	Hard, thick flakes, very white, pungent melon smell. Soluble in water, ether (but soon turbid), carbon tetrachlor. (on heating separated), alcohol (heat no change); insoluble in chloroform, turpentine (with heat deposit at the bot- tom of the tube), bisulph. carb.; separates, and heat will not combine.
7	Supplied by Messrs. Schoet- ensack and Co., London. Cake.	100.5°	190	283.1 grains, or 57 p. c. (56.6)	Hard white crystal cakes, very pungent. Soluble in water, alcohol, ether (with slight effervescence); partly soluble in turpentine, bisulph. carb.; insoluble in chloroform. On the application of heat, when cooled the ether solution shows fine needle crystals, the bisulph. carb. solution solidifies.
8	Manufactured by Messrs. De Hane and Co. Crystal.	105°	185	275.0 grains, or 55 p. c. (55.6)	A white crystalline powder, slightly deliquescent. Soluble in water, ether, alcohol; insoluble in chloroform, carbon tetrachlor., turpentine, bisulph. carbon.
9	Manufactured by Messrs. Gehe and Co., Dresden. Crystal.	110°	180	208.2 grains, or 41 p. c. (39.6)	Transparent needle crystals, caustic, rather deliquescent, slight smell. Very soluble in chloroform, ether, carbon tetrachlor. (crystals formed again with- out heat), alcohol, turpentine and bisulph. carbon (crystallizes at bottom), partly soluble in water.

quantity of chloral compound is *insoluble* in chloroform, I should consider it a hydrate,—solubility in cold chloroform and partial insolubility in cold water being quite sufficient test to lead to *doubt*; and so in proportion to the solubility, should I judge the probable quantity of chloroform which the ammonia process would yield.

Now if the theory of Liebreich, that the hydrate of chloral coming in contact with the alkalies in the blood evolves chloroform in the human system, be correct, a moment's glance will soon convince you of the immense superiority of samples No. 1, 2 and 3, and the decided obligation that pharmacists should dispense this manufacture only until it can be shown that hydrate of chloral of equal composition may be procured elsewhere.

*Therapeutical Value.*—If we review the pages of the medical journals for the therapeutical effects of hydrate of chloral, we shall find many cases where its action has been attended with marvellous results. There does seem not a little danger of its being erected into a kind of panacea for all the ills that flesh is heir to, of its true worth and fame suffering from too indiscriminate use, and from the administration of some of the impure compounds which are being supplied. Its value, however, is too real for actual collapse by its abuse; but its repute may be, and doubtless has been, dangerously compromised.

We find it employed in cases of “maniacal paroxysms,” “delirium tremens,” “traumatic tetanus,” chorea, diarrhoea, whooping cough, convulsions (epileptic or otherwise), with more or less benefit; it allays vomiting, and prevents sea-sickness; in puerperal mania it is well reported of; in fact, as a sleep compeller it is, in a very large number of cases, unrivalled; for while in power opium alone can be compared with it, there is this superiority to opium, that its use entails no unpleasant after symptoms, no head-ache, no nausea, no anorexia, no constipation, whilst the sleep it produces is gentle, calm and continued; at least, this is the general rule, but, of course, there are exceptions, and medical men complain that its administration is attended with uncertain results, and that its quality is not so good as it was when first introduced, and can anything justify these assertions more than the foregoing results? but even with true hydrate of chloral we must expect to find exceptional cases so long as human beings differ so greatly in temperament, constitution, and sensibility to the action of medicine.

That hydrate of chloral ought to be perfectly pure when used in medicine is unquestionable; the substitution of alcoholate is quite sufficient to produce most of the ill effects attributed to chloral. In fact, instead of being a hypnotic, it has a tendency to produce mental excitement, as ordinary stimulants.

The dose of hydrate of chloral is from 5 grains to 30 or 40 grains, according to the purpose for which it is required. A case is on record where 100 grains were taken accidentally without any evil results; but I am informed that there is danger in continued small doses. Very unexpected results have, in a few instances, occurred. And here I would strongly caution pharmacutists not to prescribe its use themselves, or supply it to the public without the sanction of a medical man.

Hydrate of chloral has been successfully administered as an antidote to strychnia.

Hydrate of chloral cannot, in consequence of its chemical properties, be administered in the shape of pills or in the form of powder; it is, therefore, necessary almost to confine its use to solutions. For dispensing purposes, Liebreich recommends a solution of the hydrate in its own weight of water. In small doses it can be given without the addition of a corrective, but simply dissolved in distilled water.

There are several pharmaceutical preparations in which the hydrate of chloral is disguised, or its taste modified, in various ways. Of the syrups containing 10 grains of Liebreich's hydrate in each dram, one made with syrup. pruni virg. is used in America; it is most palatable. Another is made with syr. tolu; others with syr. flor. aurant., syrup. cort. aurant. (as suggested by Liebreich). Another is flavored with almonds (Ferris). There is also a draught containing half dram chloral, with syrup tolu, tinct. ginger and peppermint water. Lozenges containing 1 grain hydrate of chloral in each are manufactured by Messrs. Meggeson & Co.

Spiritus choralis is made by Savory and Moore. It has a very agreeable taste and smell, but I was not able to obtain any deposit upon evaporating a little.

Limousin's capsules are known to contain alcoholate of chloral, because true hydrate cannot be secured in a gelatinous envelope.

In describing and dispensing hydrate of chloral, it should be borne in mind that no corrective with alkaline reaction can be employed with

it, because such an administration would bring about the transformation of the substance.

In concluding this paper, I must add that I have no interest whatever in putting forward the claims of Liebreich's manufacture, further than a feeling of moral duty to the medical profession, pharmacists and the public, together with the conviction that other manufactures which have come under my notice do not attain the desired standard. It appears that the importers of this article now know a guaranteed hydrate of chloral and an unguaranteed hydrate of chloral. There is a guarantee to the consumer, which is the protection of the hydrate manufactured under Liebreich's supervision; this is a registered trade mark. It is offered in three forms—cake, crystal and powder; but the action of the cake is more to be relied upon. Each product should be kept in well-stoppered bottles. The large quantity which the bottles with the registered trade mark contain is, I think, a drawback to its more universal application; and I think, if the agents of this manufacture could be induced to supply it in smaller bottles,—say from 1 oz. upwards,—with the registered label on each bottle, and could produce it at a cost more in proportion with the competition, they would not only further the objects of the discoverer by more satisfactory and uniform results being produced, but also benefit mankind in general.—*Pharm. Journ., Lond., Jan. 7, 1871.*

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#### GLYCERIN; ITS QUALITY AS IT EXISTS IN COMMERCE.

By JOSEPH P. REMINGTON, Philadelphia, Pa.

This powerful solvent and useful medicine, though but lately called from its seclusion in the cabinet in answer to the demands of this progressive age, has rapidly ingratiated itself into the esteem of the chemist, pharmacist, and the public at large.

It continues to widen its sphere of usefulness; we hear of new applications constantly; and its *bland manners* and *insinuating disposition* have won for it a host of friends, and an ever-increasing popularity.

It serves its mission as faithfully on the dressing-table of a lady as it does in our gas meters; as well as an excipient for pill masses as it does a substitute for molasses in printers' rollers, and its range of applications between these extremes is varied and extensive.

Its production, with a view to improve the quality and lower the

price, has been attended with success, as we all know. A glycerin which will answer almost every purpose (except for internal administration), can be procured for twenty-five cents per pound; and one fit for any purpose for sixty cents per pound.

One of the principal reasons for bringing this matter before you, is to detail a comparative examination of the different brands in the market, which examination was at first undertaken for the writer's own satisfaction, but which may prove not uninteresting to the Association. Each glycerin was tested by the same reagent, in the same relative quantity, at the same time; and the effect carefully noted.

The glycerins, as they stood in their commercial attire before the examination, presented quite a contrast; the most pretentious was one of the latest comers into the market, De Haen's; which, from the size of the bottle would lead to the supposition that it contained more

BRANDS.	For Strength. Sp. Gr.	Color.	Odor when warm.	Nitrate of Silver.
Bower's Pure.....	1.253	None.	None.	No precipitate.
Gordon's Pure.....	1.240	Yellowish.	Fatty.	Heavy white precipitate.
Concentrated.....	1.250	"	Slight.	Rose color.
Sarg's Chemically Pure.....	1.254	None.	Empyreumatic	No precipitate.
Sarg's second quality.....	1.250	Quite dark.	Like glue.	White precipitate.
De Haen's Chemically Pure.....	1.245	None.	Slight.	Rose color.

BRANDS.	Sulphuric Acid.	For Sulphate of Lime.	For Lime Salts Ox. Ammon.	Ferro-cyanide of Iron.
Bower's Pure.....	Slightly discolored.	No precipitate.	No precipitate.	Opalescence.
Gordon's Pure.....	Discolored.	No precipitate.	Slight precipitate.	Clear.
Concentrated.....	Discolored.	No precipitate.	No precipitate.	Opalescence.
Sarg's Chemically Pure.....	Discolored.	No precipitate.	No precipitate.	Precipitate.
Sarg's second quality.....	Slightly discolored.	No precipitate.	White precipitate.	Slight precipitate.
De Haen's Chemically Pure.....	Discolored.	No precipitate.	No precipitate.	No precipitate.

BRANDS.	Hydrosulph. of Ammon.	Chloride of Barium.	For Ethyl-Butyrate.	For Sugar.
Bower's Pure.....	No precipitate.	No precipitate.	Slight odor.	Free from sugar.
Gordon's Pure.....	No precipitate.	Slight precipitate.	Strong odor.	Free from sugar.
Concentrated.....	No precipitate.	Precipitate.	Slight odor.	Free from sugar.
Sarg's Chemically Pure.....	No precipitate.	No precipitate.	Very slight odor.	Free from sugar.
Sarg's second quality.....	No precipitate.	Opalescent.	Slight odor.	Free from sugar.
De Haen's Chemically Pure..	Slight precipitate.	No precipitate.	Slight odor.	Free from sugar.



than a pound. This glycerin has attracted attention by reason of the free use of adjectives on the label, and on account of a vigorous attack on the propriety of using the adjectives by the editor of a trade journal.

Sarg's Pure Glycerin is put up in a very attractive style, the blue stencilled label and the refractive property of the glycerin contrast to very good advantage.

The American glycerins were in a plainer and neater dress, Bower's, Gordon's and Concentrated being put up in the usual glycerin bottle with a plain label.

The result will be found in the foregoing table.

—*Proc. Amer. Pharm. Assoc.*, 1870.

#### GLYCERIN SOLUTIONS OF PEPSIN AND OTHER SUBSTANCES.

By LIONEL S. BEALE.

In *Nature* of December 29th, Professor M. Foster calls attention to the method of making glycerin extract of pepsin pursued by Von Wittich, and remarks with reason that the means hitherto adopted for preparing pepsin for medical purposes are clumsy and inefficient. There is, however, one exception, a mode of preparation which has long been in use, and which is by no means inefficient. This will be found to possess some practical advantages over the process of extracting the fresh mucous membrane with glycerin, while from it the glycerin solution can be prepared quite as pure and clear, and as strong as by maceration.

As long ago as 1858, ("Archives of Medicine, vol. i., pp. 269—316,) I described a method of obtaining the active digestive material from the pig's stomach, which answers perfectly, and has been employed in practice ever since. It simply consists in quickly drying the mucus expressed from the stomach glands upon glass plates.\* The dried mucus is then powdered and kept in stoppered bottles. It retains its properties for years. Eight-tenths of a grain will dissolve *one hundred grains* of coagulated white of egg.

Now, from this powder is easily prepared, by solution in distilled water, a perfectly clear and colorless digestive fluid of great activity, which *can be readily filtered*.

\* This pepsin is prepared for medical purposes by Messrs. Bullock and Reynolds, 3 Hanover Street, Hanover Square.

Some years ago, I found great advantage from subjecting tissues to the action of a very small quantity of this solution in glycerin, and keeping the whole at the temperature of  $100^{\circ}$  for some hours. By this process, the elements of the tissues were softened, and could be dissected from one another readily for examination under the highest magnifying powers.

No doubt there is much to be learnt concerning the nature of the action of such substances upon tissues by the use of glycerin solutions. For microscopical work, glycerin is of more use than any other medium. Not only may various substances be removed from tissues, but others may be introduced, and the tissue subjected to the action of various reagents without destroying it. In fact, the action may be regulated with the greatest nicety. Nearly all the tests required in microscopical examination may be dissolved in glycerin, ("How to Work with the Microscope," p. 297, 1867,) and tissues of the most delicate character may be preserved in it, and will retain their microscopic characters for years, *if care be taken to obtain the best and strongest glycerin.*—*Lond. Pharm. Jour.*, Jan. 21, 1871, from *Nature*.

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#### NOTES ON AROMATIC SULPHURIC ACID AND CONFECTION OF SENNA.

BY JOHN W. EHRLMAN.

Every dispenser is acquainted with the objections which may be brought up to the present officinal formula for aromatic sulphuric acid. As the committee on the revision of the Pharmacopœia is now in session, it is to be hoped that the formula under consideration may be modified, and with it several others of a like nature.

The aromatic sulphuric acid is used most extensively as a solvent for sulphate of quinia, in prescription, usually with watery or syrupy vehicles. When prescribed alone for the medicinal effects of the acid, it is not unfrequently diluted in order to modify its taste, and, avoiding the use of drops, to render its administration more convenient.

Now, when the elixir of vitriol is associated in this manner with watery fluids, the coloring and extractive matter becoming insoluble in the menstruum, precipitates, and the result is a muddy mixture, instead of the clear solution we should otherwise obtain. But the elixir of vitriol, even undiluted, is constantly undergoing change, with the continual deposition of a bulky precipitate, so that it can be dispensed

in a bright condition only by frequent filtration. This, of course, is exceedingly annoying, and it is a reproach to the progress of pharmacy that the formula has been so long retained without material change. The old method of preparing it by exhausting the powders with the mixed alcohol and acid is preferable to that now employed, as it gives a preparation less prone to deposit by standing. The other objections, however, apply to this with equal force; for the ingredients afford to the menstruum principles, which must of necessity separate upon dilution.

In revising this formula, we should keep in view the fact that the resulting preparation should be miscible with water without precipitation, hence aromatics of an oleoresinous nature cannot be used.

The following formula we have used for some time, and have found entirely satisfactory:

Take of Sulphuric Acid, three troy ounces;  
Fluid Extract of Orange Peel, one fluid ounce;  
Red Rose Leaves, two drachms;  
Boiling Water, one fluid ounce;  
Alcohol, a sufficient quantity.

Add the acid gradually to half a pint of alcohol, and pour the boiling water upon the rose leaves; when both liquids have become cool, unite them, add the fluid extract and sufficient alcohol to make up the measure of eighteen fluid ounces. Mix thoroughly and filter.

Elixir of vitriol, thus prepared, has a pleasant aromatic odor and flavor, and the beautiful red color of the rose leaves, heightened by the presence of the acid. It is miscible with water without turbidity, and a specimen, after long keeping, has deposited but a trace of sediment.

#### CONFECTION OF SENNA.

This preparation, when properly made, is an excellent laxative—for habitual constipation, superior, perhaps, to any other remedy. It is not in such general use among physicians or the public as it is entitled to, and this probably arises from the fact that much of the confection of senna of the market has little or no resemblance to the officinal article, and is comparatively worthless. Pharmaceutically considered, the officinal process yields a result which is unobjectionable, save in two particulars; first, the presence of the powders of senna and coriander (and especially of the latter, which is most diffi-

cult to prepare,) imparts a degree of "grittiness" which is disagreeable to the patient, giving the impression that "dirt" is present; secondly, the consistence of the confection when evaporated to the specified weight, varies as prepared from different specimens of drugs, and is sometimes too thin, when the mass is apt to go into fermentation. Fortunately, these defects may be easily remedied. In our opinion, the purging cassia, considering that it is so difficult to obtain, might well be omitted and substituted by an additional quantity of senna, particularly as there can be no advantage in multiplying the number of substances having similar therapeutical properties, in this or other preparations. We have used the modified formula given below, (the coriander also being omitted and substituted by ginger,) which is free from the objections we have mentioned. It is much more agreeable to take than the officinal confection, and is equally efficient:

Take of Tamarinds, . . . .	20 parts.
Figs, bruised, . . . .	20 "
Prunes, sliced, . . . .	15 "
Fluid Extract of Senna, 10	"
" " Ginger, 1	"
Sugar, . . . . .	30 "
Water, a sufficient quantity.	

Digest in a close vessel, by means of a water bath, the tamarinds, figs, and prunes in 10 parts of water, for three hours; separate the coarser portions with the hands, and press the pulpy mass by rubbing, first through a coarse sieve, and then through a very fine one. Mix the residue with 4 parts of water, and, having digested the mixture for a short time, treat it as before, and add the product to the pulpy liquid first obtained, evaporate to a syrupy consistence over a water bath, add the sugar, and continue the heat for twenty minutes, or until the sugar is dissolved; then remove from the bath, add the fluid extracts of senna and ginger, and mix thoroughly.—*The Pharmacist, Chicago, Jan. 1871.*

NOTE.—We feel inclined to enter a gentle protest against alterations in the characters of time-honored preparations, that change their appearance or consistence, which are well known to the medical profession and the people. The peculiar color and odor resulting from the action of sulphuric acid on cinnamon is well marked in elixir of vitriol. The deposit by age, though objectionable, is by no means peculiar to this preparation, and is a less evil than the proposed improvement.

In relation to the Confection of Senna, it is certainly a mistake to omit the Purgive Cassia, and to medicate with so variable a preparation of senna as the fluid extract, when the unaltered senna can be so readily obtained. The grittiness arising from the use of powdered senna is due either to want of care in powdering, or to inorganic grit in the senna, which should have been separated before powdering. The coriander is troublesome to powder; yet the very agreeable aroma which it possesses is difficult to replace by fluid preparations of it, and hence the trouble should be accepted. In reply to the remark of the author about the scarcity of Purgive Cassia, it may be said that *demand will bring supply*, just as certainly as cessation of demand will eventually create scarcity, as in the case in point.—EDITOR AMER. JOUR. PHARM.

#### THE PRESENCE OF MANGANESE IN BEECH-NUTS.

BY DR. J. E. DE VRIJ.

In the introductory address of the chairman of the last Pharmaceutical Conference\* at Liverpool, my attention was fixed by the following sentence:—"By some authors it has been denied that plants absorb from the earth such metals as are not absolutely essential to their nutrition. Experiments, however, afford strong evidence to the contrary. Mr. R. Warington (Journ. Chem. Soc. 1865) found in the ashes of the beech and birch 0.193 per cent. of manganese."

This quotation of Warington's investigation induces me to mention the fact observed by myself more than twenty years ago. As at that time the investigation of the ashes of plants occupied a great many chemists, I also analysed some ashes. Amongst them were the ashes of beech-nuts collected by me in the neighborhood of Giessen, in Germany. As there exists a great quantity of manganese ore in that vicinity, the presence of a relatively large quantity of manganese in these ashes seemed to me quite natural. In 1847, being at the meeting of the British Association at Oxford, I visited the beautiful park of Blenheim, and collected there on that occasion some unripe beech-nuts. After returning home, I analysed their ashes and found also in these, although grown in a very different soil, the presence of a relatively large amount of manganese. A third analysis of the ashes of beech-nuts, collected in the wood of the Hague, confirmed the same fact. As I was accustomed to use the ashes of beech-nuts in my lectures to demonstrate the reagents for manganese, this fact has been fixed in my memory.—*Lond. Pharm. Journ.*, Jan. 21, 1871.

\* *Pharm. Journal*, Sept. 17, 1870, p. 234.



## PHYSOSTIGMA VENENOSUM.\*

The *Physostigma venenosum*, or ordeal bean of Old Calabar, has of late been used medicinally. Its peculiar and powerfully poisonous properties were long ago made known by Drs. Christison and Balfour, but we owe the fuller knowledge we now possess of its powers to the elaborate investigations of Dr. Fraser, of Edinburgh, Dr. Robertson and other observers. The active principles of the bean quickly enter the blood and gradually produce general paralysis, which is due, according to Dr. Fraser, to changes effected in the spinal cord. In an animal poisoned by the bean the reflex functions of the cord are destroyed—"It acts on the spinal cord by destroying its power of conducting impressions." This results "in muscular paralysis, gradually extending to the respiratory apparatus, and producing death by asphyxia; and, in a rapid paralysis of the heart, causing death by syncope. It also causes paralysis of muscular fibre, striped and unstriped." The knowledge obtained by these investigations led to the employment of the bean as a remedy in tetanus, and a considerable number of cases have been treated by it. Dr. Fraser has a high opinion of its value, and has reported twelve cases of tetanus treated by it, of which nine recovered. Many other cases of its administration in this disease have been reported in the various medical journals, English and foreign, and in not a few of these instances the patients have undoubtedly recovered; but the results, on the whole, have scarcely supported Dr. Fraser's estimate of the remedial value of the drug, while in some cases it has been suspected of doing harm rather than good, and of increasing the patient's danger by its paralyzing action.† It has been observed, too, that in most of the cases of recovery the disease lasted about a month, just as in cases successfully treated with atropia, hydrate of chloral, and other remedies. The physostigma has been employed in other maladies. It is indisputably a weapon of great power, and must be used with great care and watchfulness: at the same time, in such a disease as tetanus, it must, as Dr. Fraser has insisted, be employed early. The Pharmacopœia contains two preparations, the powder and an extract; the first may

\* Abstracted from a series of papers on the "Progress of Therapeutics," published in the *Medical Times and Gazette*.

† Mr. Holthouse's case, *Clinical Society's Transactions*, vol. ii.; and *Medical Times and Gazette*, 1869.

be given by the mouth, in doses of from one to four grains for an adult; the extract, subcutaneously, in doses of one-tenth to one-third of a grain and more, the dosage being regulated by the effects.

The physostigma has also the peculiar properties of causing very rapidly contraction of the iris, and altering the power of accommodation of the lens, and it has been largely used and proved of great value in ophthalmic practice. Its action on the iris was first pointed out by Dr. Fraser,\* and first made use of by Dr. Argyll Robertson.† A very interesting communication on the subject, by Mr. J. Soelberg Wells, containing a description by Mr. Bowman of the effects of a solution of the bean on his own eye, was published in the *Medical Times and Gazette* in 1863.‡ It may be applied by touching the inside of the eyelid with a solution, one minim of which equals four grains of the bean, or by placing within a minute portion of paper which has been saturated with a strong solution.—*Lond. Pharm. Journ.*, Jan. 21, 1871.

#### YLANG-YLANG.

The essence of *Ihlang-Ihlang* is distilled from the flowers of the *Unona odoratissima*, a large tree which grows in the Philippine Islands, the Straits of Malacca, and the Indian Archipelago. *Ihlang-Ihlang* (improperly spelt *Ylang-Ylang* by the Spanish residents) is the native *Tagal* name this tree bears in the Philippine Islands. The Malays call it *Kanonga*, and it is found described under that name in the works of Rumphius, an eminent botanist of the seventeenth century, who says that the smell of the flowers is so powerful that it scents the air for miles around. The flowers are flosculent and drooping, and of a greenish-yellow color. They were first distilled by a chemist at Manilla, and yielded an essence of an exquisite odor, somewhat partaking of the jasmin and lilac, but still having a flavor *sui generis*. This essence is now largely manufactured, and used by the leading perfumers either pure or in compounds. It is made

\* On the Characters, Actions and Therapeutic Uses of the Ordeal Bean of Calabar." Graduation Thesis. August, 1862. *Edinburgh Medical and Surgical Journal*, 1863.

† *Edinburgh Medical and Surgical Journal*, 1863.

‡ "On the Effects of the Solution of the Calabar Bean on the Pupil," etc. *Medical Times and Gazette*, vol. i, p. 500, 1863.

principally at Manilla and Singapore. The former is the finest, and costs when pure about £2 per ounce.—E. RIMMEL.—*Lond. Pharm. Journ.*, Jan. 21, 1871.

#### ON THE USE OF WAX, TALLOW, ETC., IN SUPPOSITORIES.

BY CHARLES L. EBERLE.

QUERY 29.—The fusing-point of true butter of cacao being near that of the temperature of the body, what is the influence of such additions as wax, tallow, &c., on its fusing-point, and to what extent are such additions objectionable, if at all, in vaginal or urethral suppositories?

Pure cacao-butter may be asserted to be but rarely if ever met with in the drug market. The samples for sale vary sensibly in color and consistency, and no positive rule for judging of a pure article by cursory examination can be offered. A candid admission by several prominent manufacturers of the article, reveals the fact of its frequent adulteration, and since the extended demand and sale of this production for cosmetic and suppository application, a greater variety of mixtures known as butter of cacao is to be found than formerly.

The pharmacist, however, but seldom applies it to uses other than in the preparation of suppositories, the successful use of which depends upon a base, whose point of fusion will correspond to animal heat, which can be handled readily when in form, and which upon exposure to the natural heat of the body will promptly liquefy, not melt slowly, thus depositing quickly the medicating ingredient upon the surface to which it has been exhibited.

The butter of cacao most nearly satisfactory to pharmacial use, is of a dirty white, inclined to yellow in appearance, firm under pressure, yet disposed to yield its surface when held in the hand by the warmth thus imparted, fusing readily at or about 98°, which sets rapidly after fusion when exposed to cold, and which, after such exposure, maintains its original character at ordinary temperatures.

Such cacao-butter may be had. I here exhibit a specimen, and under proper manipulation it needs no addition of a hardening ingredient to adapt it to suppository use.

Cacao-butter at 98° F. liquefies. This is more apparent in the rectum or vagina than by merely holding in the hand. The mixtures, I mean the mixtures made by the pharmacist with the cacao-butter of the market, vary in their behavior in proportion to the quantity and character of the hardening ingredient used in connection with it.

A considerable proportion of cetaceum may be added without materially affecting the value of a suppository; at least ten per cent., if combined with the butter, will produce a suppository which will not be likely to be complained of by the medical profession, but the slowness with which this alloy, so to speak, fuses, makes this or the addition of any hardening substance a serious objection. We need promptness of action in the application of medicines by suppository, which can be best secured by rapid liquefaction of the excipient, and no mixture or single substance combines the essential requisites, so completely, as a good sample of so-called cacao-butter.

The addition of wax to cacao-butter is to be reprehended. While, under restriction, a mixture may be formed which will harden more quickly and bear more handling than the butter alone, the reflecting pharmacist will bear in mind the slowness of its fusion at animal heat, and the consequent suspension of the medicine, which should be diffused and deposited over as large a surface as possible.

Content with the simple fusion of such mixtures, the ease with which they may be manipulated, and the temptation to dispense quickly, the more important fact has been overlooked by many, who will doubtless correct the error in their future operations. I have invariably found that when the additions were not large enough to render the use of the moulded cones inadmissible, there was no advantage gained by a combination of base or excipient.

With regard to the effect upon the animal tissues of such applications of hardened suppositories, I can only say that where they are of such a character as to produce local irritation, the uneasiness induced requires their removal; this objection is now but seldom met with. Within the past two years the education of the pharmacist has materially advanced in this direction, so that no store of repute dispenses cones that will not at least fuse at animal temperature, however slowly this fusion may occur, or however imperfectly they may medicate from the suspension of the medicine until its ejection by the action of the parts. Those having but occasional prescriptions for them, are now in the habit of depending on the larger retail establishments, who furnish the trade with a great variety.

There need be no apprehension of a local irritation arising from the use of wax, if not carried beyond the proper fusing-point. As much as fourteen per cent. is used by pharmacists of good repute, without complaint in this respect. The mixture fuses quite slowly at animal

temperature, but there is no apparent dissection of the cone, whereby the wax is separated from the butter *during fusion*, however much this may be the case when the melted substances are allowed to cool *ad libitum*. There is a uniformity of constitution so long as the heat is present.

(To be continued in the April number.)

## SEMI-CENTENNIAL ANNIVERSARY OF THE PHILADELPHIA COLLEGE OF PHARMACY.

At the College Hall, February 23d, 1871.

At the meeting of the Board of Trustees, held on Tuesday, the 7th of February, a committee of three, consisting of Wm. C. Bakes, James T. Shinn and Thomas S. Wiegand, were appointed, to take all measures necessary for celebrating, in a suitable manner, the approaching fiftieth anniversary of the first meeting of the College, at the Hall on the 23d instant.

In pursuance of this duty, the Committee issued tickets of invitation to a large number beside the members, including several pharmacutists in other cities.

On the 23d of February, at 7½ P. M., the members and invited guests gathered, to the number of two hundred and fifty, in the lecture-room, second story. On the tables a number of objects, interesting for their antiquity and calculated to show a contrast with similar articles of the present day, were arranged. Among them an old rose-water still and an exhausting apparatus, the modern elastic clyster apparatus, with the old pipe-and-bladder arrangement, old chemicals, labels and books, with quite a display of the best chemicals of the present day from the laboratory of Rosengarten & Sons. It was pleasant to observe so many friends, whose interest in the Institution had brought them to the meeting. Among them we observed Prof. Moore, Mr. Thompson and Mr. Sharp, of Baltimore, Mr. Bedford, of New York, Mr. Heinitsh, of Lancaster, and Mr. Lemberger, of Lebanon, Pa. Prominent among the medical gentlemen present, were Professors Rogers and Leidy, of the University of Pennsylvania, and Professors Gross and Rand, of the Jefferson College; Dr. W. L. Atlee and Dr. Ruschenberger, U. S. N., of Philadelphia; Prof. Carson, Prof. Wood and the venerable Prof. Samuel Jackson, all ex-professors of the College, were prevented from coming. After more than half an hour spent in conversational intercourse, President Dillwyn Parrish called the meeting to order in a few remarks, and invited Peter Williamson, Esq., who officiated at the initial meeting as its secretary, fifty years ago, to preside. Mr. Williamson, in taking the chair, addressed the meeting as follows:—

"Gentlemen: I return you my thanks for this expression of your desire that I should preside on this interesting occasion—an occasion, gentlemen, which, with its pleasant memories, is not unmingled with its thoughts of sadness. These naturally force themselves upon me as I look around and see but few of those



who were associated with us in the early organization of the College. Many who were my personal friends are no more. Death has, indeed, thinned our ranks, and left but few to join in this our fiftieth anniversary, and the few who remain must ere long follow those who have preceded them to 'that bourne whence no traveller returns.' But, gentlemen, I will not detain you by giving expression to my own feelings, but will proceed by carrying out the programme which has been arranged for the celebration of our semi centennial anniversary."

The President then requested the Secretary of the College, Charles Bullock, to read the minutes of the first meeting of the originators of the College of Apothecaries, held at Carpenter's Hall, February 23d, 1821. This was then carried out, and many interesting points relative to the institution of the College were brought forward illustrating the circumstances of its origin.

In the absence of one of the most faithful historians of the College, Samuel F. Troth, James T. Shinn was called upon to read from a memoir, prepared by that gentleman, historical notices of the officers, professors and transactions of the College, in giving a fair account of that group of earnest men whose public spirit and liberality had fostered the early growth and development of the institution—such as Charles Marshall, Peter Lehman, Henry Troth, Daniel B. Smith, Dr. Samuel Jackson, Peter Williamson, Samuel Biddle, Frederick Brown, Charles Allen, Samuel P. Wetherill, Charles Yarnall, Stephen North, Algernon S. Roberts, Warder Morris, Edward B. Garrigues and many others.

Five years elapsed before a diploma was granted; the lectures were delivered in the old Hall of the German Society, now the gas-office of the city, Seventh, below Market. The names of the professors in the School of Pharmacy were then called over. Dr. Gerard Troost on chemistry, and Dr. Samuel Jackson on materia medica, were the original faculty in 1821. Dr. George B. Wood succeeded Dr. Troost in 1822. In 1827, Dr. Benjamin Ellis succeeded Dr. Jackson, who was elected to the University. In 1831, on the death of Dr. Ellis, Dr. Wood was transferred to the chair of materia medica, and Dr. Franklin Bache elected to the chemical chair. In 1835, Dr. Wood having been elected to the University, Robert Egglesfeld Griffith, M. D., succeeded him for a single course, when he entered the faculty of the University of Maryland, and was succeeded by Dr. Joseph Carson. In 1841, Dr. Bache having been elected to the Jefferson Medical College, he was succeeded by Dr. William R. Fisher, late of the University of Maryland, whose health giving way, he resigned in 1842, and was succeeded by the present incumbent, Dr. Robert Bridges, whose service of nearly thirty years, claims for him the title of veteran. Much to the regret of his numerous friends, Dr. Bridges, now convalescing from a serious attack of typhoid fever, was unable to attend. In 1846, the new professorship of Pharmacy was instituted, and William Procter, Jr., a graduate of the College of 1837, was elected to fill the chair. In 1850, Prof. Joseph Carson, after a faithful service of fourteen years, resigned his position, to succeed Dr. Wood in the University, when Dr. Robert P. Thomas was elected to succeed him. Dr. Thomas, after a most energetic and faithful service of fourteen years, during which, largely owing to his exertions, the class doubled its numbers, died in the midst of his usefulness at the close of the session early in 1864, and was suc-

ceeded by Edward Parrish, a graduate of the class 1841-2. In 1866, Prof. Procter retired from the chair of Pharmacy, after twenty years' service, and John M. Maisch, late of the Army Laboratory, was elected to the chair of Pharmacy. Finally, in 1867, Professors Parrish and Maisch exchanged their chairs with the approbation of the Board, and are the present incumbents.

The idea of having a Laboratory School, for teaching Practical Pharmacy and Pharmaceutical and Analytical Chemistry, had often been suggested as needful to complete the tuition in the College. But it was not until a fund was raised, through the efforts of its Alumni, and a suitable apartment provided by the Institution, that it was carried into effect the present session by the untiring industry of Prof. John M. Maisch.

In view of the connection which the University of Pennsylvania had with the origin of the College, the President invited Dr. R. E. Rogers to speak. Dr. Rogers, after apologizing for want of preparation, said that his heart had been touched in connection with this celebration, and he could not hesitate to accept the invitation extended. He had learned a curious fact to-night—that, instead of this College being the child of the Older Institution, they were brothers, and stood together in fraternal affection. He congratulated the assembled company upon the success which had attended the labors of those few independent men who refused the patronizing hand extended by the old University, and preferred to labor only as brothers in the kindred works of Medicine and Pharmacy. He spoke favorably of the excellent influence this College had had on the practice of medicine, and extended his hearty sympathy to it as a beneficent institution now celebrating its semi-centennial anniversary. Dr. Leidy made a few remarks. Prof. Samuel D. Gross, of the Jefferson Medical College, being called upon, responded in a speech of some length, saying that he was somewhat familiar with the history of the College of Pharmacy; he had never lost sight of it since he had become acquainted with it. He needed not to say how much, not only the medical profession, but the general public were indebted to this College for its sanitary influence. He was somewhat astonished at the want of appreciation of the Institution by the people of Philadelphia. He believed that its influence had gone far to change the character of Pharmacy and medicines in this country since he commenced the study of medicine, and that its graduates, scattered throughout the land, had accumulated a wealth of practical information that he was glad to acknowledge. After alluding to some curious and amusing facts in connection with the Pharmacy of the seventeenth century, he acknowledged the heavy debt due by medicine to chemistry for its discoveries and improvements in the *Materia Medica*. He considered the apothecary an important individual, standing between the physician and his patient, to aid his curative efforts, and frequently to correct the clerical errors which all physicians are liable to make in their prescriptions, and which the skilful apothecary knows how to detect. Dr. Gross, in conclusion, expressed his sympathy with the object of the meeting.

Prof. Edward Parrish being called for, alluded to the fact that the birth of our College occurred at a time when the labors of the brilliant corps of *savants* that marked the early years of our century had culminated in those numerous

discoveries that now formed the broad and deep foundations of the science of chemistry, and which have rendered the names of Davy, Dalton, Berzelius, Faraday, Ampère, Oersted, Arago and others, imperishable. He alluded to our Dr. Hare as one of this class, and considered the influences arising out of this new epoch in science as favorable to the new-born College.

Thomas S. Wiegand, on being called, stated, in regard to the work accomplished by the College of Pharmacy, that it might be proper to recall some of the evidence; primarily the School of Pharmacy was a leading object when the College was organized; this the meeting well knew. Its progress from a class of three to that of the present class, 198, is a note-worthy advancement. The advantage of intercourse among brethren in the same calling whose position as business men precluded their attendance on the lectures was alluded to; one of its best results was the publication of the Journal. It commenced as a slim pamphlet, four numbers of which were issued in three years! It has now completed its 42d volume, of 600 pages yearly, and it was hazarding nothing to say that in no other serial was there more useful, practical, every-day information suited to the wants of the apothecary, and that, after forty years growth as a gratuitous business under the auspices of the Committee outside of the College, it had come to reside at home, and that this Hall was now the office of publication, where, under the direction of its Business Editor, its material interests would receive prompt attention. Mr. Wiegand then alluded to the resignation of the Editor, to take effect at an early date. He, in common with the members generally, regretted the change, but, that after the reasons assigned, the College felt it necessary to accept. There was one duty left, that of acknowledging the great debt we all owe to the Editor for his untiring labors, and asking his acceptance, from his many friends, of a testimonial to this feeling.

[The Editor, who until this moment, was unconscious of having any part to act in the programme, was completely taken by surprise when Mr. Wiegand stepped toward him and presented a handsome gold watch, of American manufacture, bearing his monogram and a complimentary inscription.]

Mr. Procter replied, in regard to the testimonial, that he hardly knew how to express himself in proper terms; he had not expected to take so conspicuous a part in the proceedings, and could only heartily thank his friends for their valuable gift; but in relation to the objects of the meeting and the Journal he might be permitted to say a few words. Among the agencies that had been active about the rise of the College was a class of men called Manufacturing Chemists, whose influence on pharmacy and medicine had been somewhat overlooked this evening. It was true that numerous and brilliant discoveries were made in chemistry, but it was such men as Pelletier and Robiquet and Merck abroad, and Farr and Kunzi and Rosengarten and their successors at home, who, in working out the problem of economical production of chemicals from these discoveries in chemistry, did invaluable service to Pharmacy and, through it, to medicine, by multiplying and cheapening valuable medicinal agents, at the same time that uniformity and potency was increased, as was acknowledged in general terms by our medical friends this evening. In regard

to the Journal, it should be known how much was due to the labors of that band of disinterested men, of whom Daniel B. Smith, Elias Durand, Charles Ellis, Dr. George B. Wood, Dr. Samuel Jackson, Samuel P. Griffiths, Jr., Thomas Evans, William Hodgson, Jr., John C. Allen and Joseph Scattergood were examples, who suggested and sustained it with practical contributions and original papers at a time when such laborers were scarce, until the graduates came to its support. The first desultory numbers were wholly thus made up, and the best papers, even after the appointment of an Editor, were from these men. The labor of editing in its early history was increased by the scarcity of material. [The French being the only pharmaceutical journals then reaching this country, and the medical journals being meagre in subjects appropriate for selection.] Dr. Benjamin Ellis edited the two first regular volumes, commencing April, 1829, Dr. Griffith the next five, Dr. Carson the next thirteen, and the present Editor the remaining twenty-two volumes. Dr. Carson's numerous papers on *Materia Medica* and Botany, ranging through the long period of his editorship, are a fitting memorial of his connection with the work. During the service prior to 1842 the foreign selections involved much editorial labor in translating, but after that time greater facilities in the foreign mail service, and the valuable aid of the English and French journals then commenced, widened the means for selection. With the advantages thus attained, and the growing contributions of the graduates yearly scattered over the country, the present Editor, as the Assistant of Dr. Carson, commenced his career under more favorable auspices than his predecessors, and, on his accession to the Editorship, it is no matter of surprise that, with reasonable industry, the Journal, in 1853, should have doubled in size and increased in interest.

Prof. J. Faris Moore and Mr. A. P. Sharp, of Baltimore, being called upon, offered a few remarks in sympathy with the objects of the College and its anniversary, and congratulated the members on its success.

The meeting then adjourned to the main lower hall, where an ample collation was provided for the company. The time passed rapidly in genial intercourse of old and new friends, and in examining Prof. Maisch's practical laboratory, the cabinets and library in the adjoining rooms. So passed the first Fiftieth Anniversary of our College; may the second witness even greater evidences of the progress and usefulness of our *Alma Mater*.

### *Minutes of the Pharmaceutical Meetings.*

At the meeting held January 17, Dr. Pile continued his problems on alcoholic menstrua, for ascertaining strength of and preparing alcohols of different percentage from a definite strength alcohol.

1st. To reduce alcohol to any desired strength.

2d. To make a definite quantity of any desired strength from a stronger alcohol.

3d. To make a mixture of any desired strength by mixing a stronger and a weaker alcohol.



4th. To make a definite quantity of any desired strength by mixing a stronger and weaker alcohol.

*Answer to Problem 1st.*—Multiply the quantity of the alcohol (either in fluid ounces or in gallons) by its percentage strength (Tralle's alcoholometer) and divide by the required per cent.; the quotient gives the quantity to which the alcohol must be diluted.

*Answer to Problem 2d.*—Multiply the required amount by the required per cent., and divide by the per cent. of the given alcohol; the quotient gives the quantity to which the alcohol must be made up by the addition of water.

*Answer to Problem 3d.*—Subtract the percentage of the weaker alcohol from the required per cent.; the difference indicates the quantity of the stronger alcohol to be used. Next, subtract the required per cent. from that of the stronger alcohol; the result indicates the quantity of the weaker alcohol to be used. Mix the two results together and, as the contraction will be more or less, add sufficient water to make the mixture equal to the quantity of the two liquids before mixing. For example, it is desired to prepare an alcohol of 60 per cent. by mixing an alcohol of 90 per cent. and one of 40 per cent.

$$60 \begin{cases} 40 = 20 \text{ of the 90 per cent. alcohol.} \\ 90 = 30 \quad \quad 40 \quad \quad \quad \end{cases}$$

Add water sufficient to make 50 parts.

*Answer to Problem 4th.*—Ascertain the quantity of each alcohol to be mixed (by Prob. 3d). The proportion which the required amount bears to the quantity thus shown will indicate the relative proportion of each alcohol to be used. Thus, if 30 parts were required to be made from the two liquids given in the previous example, as 30 is to 3.5ths of the mixture, then 3.5ths of each alcohol must be taken, or 12 parts of the 90 per cent. alcohol and 18 parts of the 40 per cent. alcohol, adding sufficient water to make 30 parts.

These rules comprise most cases which are likely to occur in preparing solutions of alcohol in water, and are interesting problems in pharmaceutical arithmetic.

Dr. Pile described a package of saffron coming under his notice in which, covering nearly half an inch of the entire surface, was a mass of small worms; in the centre was a mass (about  $\frac{1}{4}$  of the whole) of small specks, which proved upon examination to be excrement of the worms.

Professor Maisch spoke of a sample of adulterated saffron with about 10 per cent. of carbonate of lime fixed to the saffron with some saccharine matter. A sample was also observed in Switzerland containing 3 or 4 per cent. of the same adulteration. Mr. Hanbury, of London, about the same time examined a specimen containing 15 or 16 per cent. of the same material fixed to the stigmas. These specimens had no suspicious appearance until placed under the lens of an ordinary magnifying glass, when the fraud was easily detected. By throwing the suspected samples into water, the carbonate of lime will fall to the bottom of the vessel, while the saffron will float. Prof. Maisch also spoke of a sample, of frequent adulteration,—carthamus and calendula having been dyed with a solution of true saffron. This sample also contained a large quantity of the styles of crocus.

Mr. McBoring spoke of the difficulty of filtering a tincture of senega after having been evaporated preparatory to making Compound Syrup of Squill, owing to the large quantity of pectin contained in the senega. The question was asked, whether bicarbonate of potassa interfered with the tartar emetic.



Prof. Maisch replied that he did not think there was any change in tartar emetic, the bicarbonate only neutralizing any excess of acid that may exist in the preparation.

Dr. Pile inquired for a practical test for glycerin, one that may be employed without delay, and with little preparation, one to be proof against the ordinary and most common adulterations. Mr. Remington, who has been making some experiments in this direction, gave as his experience, after the examination of several (8 or 10) specimens of the most prominent makers, that a glycerin which is not discolored by nitrate of silver in solution was generally pure; the nitrate will in 5 minutes show a discolorization should impurity exist. He considers that sulphuric acid is not thoroughly reliable; there is a possibility that the bottle in which it is kept contained straw, cork, or some organic matter, upon which the acid would immediately act, and possibly condemn a pure glycerin in this way. Trommer's test may also be applied to glycerin, and is entirely reliable in determining the presence of sugar.

Mr. Shoemaker produced a circular on "Ætherlidon Chloral," used in Berlin as a substitute for chloroform, without unpleasant result.

Prof. Maisch gave the results of his experiments with hydrate of chloral of different makes generally known as German. The experiments were made with a view to overcome, if possible, the disagreeable pungency found on opening almost every vial of this salt. The pungency is probably due to an excess of hydrochloric acid. Attempts were made to neutralize this with carbonate of ammonia. This seemed to overcome the unpleasantness for a short time; when, however, the bottle was again unstoppered the hydrate chloral possessed the same qualities.

A sample of crystallized hydrate of chloral was exhibited. This preparation is more permanent and may be crystallized from bisulphide of carbon. The chloral fuses by heating the bisulphide to about 60 or 65°. On cooling, the entire solution is filled with crystals. The following process was detailed: Take a half-gallon retort, with capacious neck; into this place 1 lb. bisulphide of carbon and 5 oz. of commercial hydrate of chloral; stop the neck of retort with a small piece of cotton, to prevent waste of bisulphide; place the bulb of retort in hot water; the chloral will first fuse; agitate the retort until entirely dissolved; set aside to crystallize; by keeping the neck of retort cool during process the vapor of the bisulphide when condensed will flow back into retort; by careful use the bisulphide will serve for several operations. Allow the crystalline mass to remain several hours in retort, when, with a glass rod, the crystals can be removed, dried, and are ready for use. The solution drawn off still contains chloral, which will in time crystallize. The crystals are long, needle-shaped, sometimes reaching 2 or 3 inches in length. In this form chloral is possessed of little or no pungency, and is far preferable for dispensing purposes. By placing aqua ammonia near chloral as met with in commerce, dense white clouds are formed, indicative of hydrochloric acid

*Minutes of Meeting held February 21st, 1871.*

Meeting called to order. Prof. Procter in the chair. Minutes of last meeting were read, and approved without alteration.

Mr. Gaillard presented to the College a copy of Glauber's Chemistry, a very interesting reminiscence of chemistry and pharmacy of 200 years ago. The work dates 1689.

The thanks of the meeting, on behalf of the College, were unanimously tendered to the gentleman for his valuable contribution to the College library.

A communication from Charles Bullock was read, as follows:

A disaster, occasioned by the breaking of large show-bottles from freezing, during the late cold weather, lead to experiments to determine the congealing point of mixtures of glycerin with water, with results as follows. Common glycerin, sp. gr. 1.250=29° B., was used:

$\frac{1}{2}$ pint	Glycerin in	1 gallon of Water	congeals at	30° F.
1	"	"	"	24° F.
1 $\frac{1}{2}$	"	"	"	18° F.
2	"	"	"	10° F.
3	"	"	remains fluid at	3° F.

Prof. Maisch spoke of a combination of oil of wintergreen and sesquichloride of iron as forming a very beautiful coloring material for show-bottles. Prof. Procter thought this combination was not permanent enough, as it soon lost its brilliancy by exposure to the sunlight.

Prof. Procter mentioned an article, to appear in the March number of the *Journal*, by Mr. Wharton, of Nashville, Tenn., recommending the use of carbonate of magnesia in making syrup of senega and comp. syrup of squills. The magnesia is used similarly to the process for the officinal waters, and is said to entirely overcome the objectionable cloudiness generally found in this preparation, forming, probably, a pectate of magnesia. (See page 101).

Mr. England said he had no difficulty in making a clear preparation, by percolating the senega with diluted alcohol first, then using water, evaporating the watery solution, mixing with the tincture first obtained, boiling, evaporating and allowing to settle, filtering, and adding the sugar.

Mr. McIntyre had used glycerin and carbonate of magnesia; the glycerin to prevent the extract formed by evaporating from becoming too hard and unmanageable. This preparation was pronounced to be very satisfactory.

Prof. Procter spoke of the original formulæ for comp. syrup squills, as invented by Dr. Cox, which consisted of a watery extract evaporated to syrupy consistence and combined with honey.

Mr. Gaillard had used with success carbonate of magnesia in the preparation of tinct. nux vomica, which obviates any cloudiness from fixed oil.

Prof. Maisch made some further remarks upon the crystallization of chloral hydrate from bisulphide of carbon. Not being able to entirely free the crystals from the unpleasant taste and smell of the solvent, alcohol was experimented with. One half pint was used, and dissolved 17 $\frac{1}{2}$  ounces of chloral as fast as it was added, the mixture measuring 18 fluidounces. Prof. Maisch could not report finally on this process until the next meeting. Chloral does not evaporate as fast as is generally supposed. The difference in price between

the German in mass and in crystals is about 20c. gold on the pound, the crystals being the higher in price.

Mr. Shinn exhibited two lemons which had been wrapped in tin foil since November. On examination one of them had undergone partial decomposition, while the other remained fresh, having the characteristic odor. They could be bought when plenty at 15c. a dozen, and kept in this way for a great length of time. [This is E. Baudrimont's method, see this Journal, vol. 42d.]

Prof. Maisch exhibited some seeds of strychnos, structure similar to that of nux vomica; came as ballast from the East Indies, and were bought by a New York drug house; supposed to be from *Strychnos tieute*; fruit about size of a cherry, having six large seed. No experiments were made toward obtaining strychnia from this species.

Mr. England suggested a plan for preparing fluid ext. of vanilla, using powdered quartz in connection with sugar. This was thrown into a bottle closely corked, and boiled. By this means the aroma of the vanilla is retained, and the bean entirely exhausted.

Prof. Procter spoke of purifying residuary alcohol, and the difficulty in overcoming the odor of some substances—buchu, or cubebs, for instance. He mixed alcohol recovered from many different preparations, added 20 grs. permanganate of potassa per gallon in  $\frac{3}{4}$  of water, and after a day's contact distilled; could not destroy odor of buchu.

Prof. Maisch exhibited a specimen of cherry grown as an ornamental tree in some Southern cities, but native of W. I. Islands and Panama. This plant has a very strong odor of hydrocyanic acid. Leaves margin entire; rarely so in the cherry family. Prof. Maisch pronounced this to be *Prunus* or *Cerasus occidentalis*; could be used in making cherry laurel water, and for preparing an oil similar to oil of sweet almonds, which is almost entirely derived from peach kernels.

Some remarks were made on a recent law-suit in our courts, growing out of a lot of adulterated assafetida, which was purchased by a wholesale house in this city, to arrive, for a fair article. Upon being opened and examined it was found to be largely adulterated with gypsum. From this fact the parties refused to take it. The law was resorted to, and after a thorough examination it was found to contain in some specimens as high as 60 per cent. of sulphate of lime; the case containing the best article, when examined, proved to be composed of 27 per cent. of the same material. The case was decided for defendants after a very able charge by the judge to the jury, pronouncing the assafetida unmerchantable.

Prof. Maisch exhibited a specimen of Tampico jalap, which comes into this market very rarely—then only as a materia medica specimen.

Prof. Procter spoke of a sample of saffron, found recently in London, containing 45 per cent. of carbonate lime.

Mr. England recommended the use of butter in making citrine ointment, being careful to free the butter from salt.

There being no further business the meeting adjourned.

CLEMONS PARRISH, Registrar.

## Editorial Department.

**THE SEMI-CENTENNIAL ANNIVERSARY MEETING.**—Our readers are referred to page 130, for an account of the proceedings on that interesting occasion. The absence of several old members and staunch friends of the College, whose presence was expected, was regretted, and, among these, none more so than Daniel B. Smith. Elias Durand and Prof. George B. Wood. The good feeling on the occasion was unmarred by any accident, and the arrangements of the Committee, both at the meeting and at the refreshment tables afterwards, seemed entirely satisfactory and greatly to the credit of their executive ability.

**COMMENCEMENT.**—The Annual Commencement of the Philadelphia College of Pharmacy will take place on Wednesday evening, March 15th, at the Academy of Music. Seats will be reserved for members of the College and their families, if desired, by applying, on or after Monday, March 6th, at the store of A. B. Taylor, Secretary of the Board, 1015 Chestnut Street. Members should apply in time, as well to aid the Committee as to secure a choice of seats. Should any of our friends in other cities desire to be present, a word sent to Mr. Taylor will secure them seats.

**THE ANNUAL MEETING OF THE COLLEGE** will occur on the 27th of March, at 3 o'clock, P. M., at the College Hall, North Tenth Street. It was thought by some that the Semi-centennial Celebration should have been held at the usual time of the Annual Meeting, but the Board decided that the time to celebrate was the date of the inception of the idea of a Society at the first meeting, and hence the course taken. The numerous attendance at the late occasion justifies us in hoping that the members will be fairly represented in numbers on the 27th of March, on which occasion the Annual Election will take place. Members will do well to examine closely the new By-Laws, printed with Journal for January, 1870, so as to be posted on the subject.

**SYRUP OF SENEKA.**—The following communication was received too late for insertion among the original matter, but is printed that it may be considered along with the paper of Mr. Wharton at page 101.

“TOLEDO, OHIO, Feb. 20, 1871.

*To the Editor of the Journal of Pharmacy:*

Having unsuccessfully tried several formulas for preparing Syrup of Seneka as given in your Journal, I tried the following method with satisfactory result.

R Ext. Senegæ fluid, ℥iv.  
Sacchari albi pulv. gross., ℥xv.  
Magnesiæ Carbonatis, ℥ss.  
Aqu fontanæ, Oss.

Evaporate the extract of Seneka by water bath to ℥ii, triturate with the Magnesiae until thoroughly and evenly mixed, add the water and filter, adding water until ℥viii have been procured; add the sugar and dissolve by gentle heat. The product will be a clear syrup that will keep well.

The fluid extract used was prepared by Campbell's process, and represented 16 troy ounces of the drug to 16 fluid ounces of the extract.

WM. J. BACHE."

**CHLORAL HYDRATE.**—The following note from Messrs. Morson & Son, of London, in relation to the reliability of certain statements in a paper by Mr. Mason, of Liverpool, is given a place in this number, because we have reprinted Mr. Mason's paper at page 113, and do this in justice to the parties claiming a suspension of judgment.

Messrs. Morson & Son feel it necessary for their protection to inform their friends that the statement made by Mr. A. H. Mason in a paper on Chloral and its preparations, read at the Chemists Association in Liverpool, and published in the Pharmaceutical Transactions for Jan. 7th, is entirely incorrect as regards the strength and purity of the Hydrate furnished by Messrs. Morson & Son, and also as regards the preparation of this substance by several eminent German makers to whom great injustice is done. Although this publication would be considered by most readers as a trade advertisement, yet its hasty publication in the Pharmaceutical Journal requires that it should not pass unnoticed and uncontradicted.

31, 33 & 124 Southampton Row, London.

**THE NEW JERSEY PHARMACEUTICAL ASSOCIATION.**—The following communication, relative to the Annual Meeting of this body, has been received from the Corresponding Secretary, Mr. Charles B. Smith:

The Annual Meeting of the New Jersey Pharmaceutical Association was held at the rooms of the Young Men's Christian Association, in Trenton, on Wednesday, Feb. 1st. Owing to the illness of the President, C. H. Dalrymple, Esq., of Morristown, Vice-President Dr. E. P. Nichols, of Newark, presided, and called the meeting to order at 10.30 A. M. The minutes of the last meeting, held at Long Branch, were read and approved.

Vice-President Nichols read the annual report, giving a history of the formation of the Association, its progress and growth to the present time.

The election of officers for the ensuing year was next proceeded with, resulting in the unanimous re election of the old officers.

The Committee having charge of the proposed Pharmacy Law reported progress, stating that the bill was in the hands of the Judiciary Committee, and would be reported to the Legislature at once, and they were quite hopeful of its becoming a law at an early day.

The members present all expressed themselves very much in favor of the bill, believing that the time had now come when the interests of the people as well as their own demanded a higher and better established standard of moral and educational qualification for persons engaged in the practice of Pharmacy.

It was decided to hold a special meeting at Long Branch, on Wednesday, August 16th, in addition to the regular annual meeting, to be held in Trenton in February, 1872.

We understand that strong opposition is made to the bill by certain physicians, because of its requiring *all* to submit to examination who hereafter propose to open apothecary stores, claiming that they should be exempt and at liberty to open as many stores as they choose.

**MONUMENT TO DR. W. T. G. MORTON.**—Certain citizens of Boston and vicinity, believing that the late Dr. Morton has a rightful claim to be considered



"the inventor and revealer of anæsthetic inhalation," have erected a monument to his memory in Mount Auburn Cemetery, and have transferred it to his family as a mark of gratitude to his memory. If the inscriptions on this monument are the *truth*, then was Morton deserving of this and higher honors; but there are many who believe with equal sincerity that the true "inventor and revealer of anæsthetic inhalation" was the late Dr. Horace G. Wells, of Hartford, Connecticut. If it be true that to conceive the idea of avoiding pain by inhalation, and successfully to submit to the process, be a test, then, surely, to the memory of Dr. Wells must accrue the honor of directing the world to anæsthesia in surgery. The failure of the experiment at Boston is now known to have been accidental, as nitrous oxide has everywhere been proved to possess the power Dr. Wells claimed for it before the medical tribunal at that city. The enterprise and perseverance of Dr. Morton, in finding a more manageable anæsthetic deserves a just and fair reward; but it should not exclude from a higher award the claims of Dr. Wells as the genius who first demonstrated practically anæsthesia in surgery.

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LAW VS. LATIN.—According to the *Boston Med. and Surg. Journal*, the Legislative fathers of that classical centre are becoming surfeited with the language of Cicero, and will have none of it. It appears that a proposition to compel physicians to write their prescriptions in English has been before the Legislature, but has been stopped by representing the true nature of the question in a candid and straightforward manner. It is a satisfaction to learn that the law-makers manifested so much good sense.

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THE REGISTRY LAW IN BALTIMORE. We cut the following from the *Baltimore Sun*, as indicating that the new law for sustaining the better education of apothecaries in Baltimore is not a dead letter:—

*A Druggist Heavily Fined.*—R. H. Laurence, a druggist, doing business in the western section of the city, was arraigned before Justice Bride, yesterday, by policeman Quinn, upon the charge of prosecuting his business without being registered, and without having undergone the examination required by an act of the General Assembly, passed in 1870. He was fined fifty dollars and costs.

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THE BUSINESS EDITOR OF THIS JOURNAL.—In our February editorial notice of the appointment of Mr. WOLLE, we accidentally wrongly stated his business hour at the College. We now say that it is between 10 and 11 o'clock, A. M., daily, at the College Hall, 145 North Tenth Street. The notice on the cover will give particulars in reference to advertisements.

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ERRATUM.—In the last line of page 58, February number, read Aq. f3viii, instead of f3ij. Readers will please make the correction.

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*Proceedings of the American Pharmaceutical Association* at the 18th Annual Meeting, held in Baltimore, Md., September, 1870; also the Constitution and Roll of Members. Philad.: Sherman & Co., printers, 1870. 352 pp. Octavo.

This volume was received from the Secretary on the 11th of February. The

Editor and Committee had fully expected to be able to publish the work before the end of the year 1870, but the phonographic reporter failed to render the first part of his report until the 27th of October, and the last portion until the 23d of November, more than two months after the meeting; hence the printer was left waiting all that time, as the minutes involving that report had to appear first in order. If it be possible, some understanding should be had with the reporter for the prompt preparation of the manuscript in future.

In our November issue such a full notice was given of the meeting that it is not necessary to go over the ground as regards the minutes, and we have already printed several of the special reports. It remains to notice the Report on the Progress of Pharmacy. This document occupies 96 pages, and in its general aspects is framed like several that have preceded it, but is about 60 pages less in extent than the report of 1869, and less elaborate in its details. The plan of giving a skeleton of papers is a great improvement on the earlier plan of a mere repetition of their titles, and enables the reader to form an idea of their scope and interest, and makes the work very suggestive to the reader and inquirer.

The report is creditable to the Association, and a worthy addition to the labors of Dr. Mahla, previously published.

The official report on the exhibition of specimens at Baltimore, varies somewhat from that published by us in November, from the newspapers, yet does not very essentially differ. This is followed by the address to the North German Apothecaries Association on the occasion of their 50th anniversary, prepared and forwarded by the Committee—Dr. Hoffmann, Prof. Maisch and Mr. Sargent. The final chapter embraces the laws relating to the practice of Pharmacy passed in the United States during the year 1870. These are three in number: one by Rhode Island, embodying the chief provisions of the draft of a law offered in the proceedings of 1869, included in 13 sections. The second is the Baltimore law, passed by the Maryland Legislature, containing 9 sections, which is also a registry law, and requires that no person not in business at the passage of the act, and registered under the act, shall, after its date, open a store for the dispensing of medicines without a certificate of efficiency from the commissioners appointed under the law, unless said person has a diploma from a college of pharmacy, based upon a regular apprenticeship to the apothecary business. Already, as noted above, this act has been carried into effective operation.

The third law was passed by the Legislature of Pennsylvania, in March, 1870, and is entitled "*An Act to Prevent and Punish the Publication of Obscene Advertisements and the Sale of Noxious Medicines.*" This law is aimed at that class of advertisers and medicines that relate to venereal diseases and the production of abortion, as well as to those apothecaries who aid and abet by selling quackeries intended for the last base purpose, and has a penalty not exceeding 1000 dollars, and imprisonment not exceeding 6 months. The law excepts medical illustrations used in the tuition of regular medical colleges and those in standard medical books.

This law has already greatly improved the character of the newspaper advertisements against which it was directed.

In conclusion, it may be stated that the paper and typography are excellent, and that the volume is creditable to the Editor and Committee.

*Braithwaite's Retrospect of Practical Medicine and Surgery.* Part lxii. January, 1871. New York, W. A. Townsend & Adams, Publishers. 1871. Three hundred and six pages, octavo.

*The Half-Yearly Abstract of the Medical Sciences.*—Being a digest of British and Continental Medicine, and of the Progress of medicine and the collateral sciences. Edited by William Domett Stone, M. D., F. R. S. C. Vol. lii. January, 1871. Philadelphia, Henry C. Lea, Publisher. 1871.

These excellent standard serials are full of valuable abstracts from the journals. Recent information on New Remedies—Chloral, for instance, especially in the direction of therapeutics—is abundant.

*The Oregon Medical and Surgical Reporter.* Vol. i. No. 12. December, 1870. Edited by H. Carpenter, M. D., assisted by the medical faculty of Willamette University, Salem, Oregon.

This Journal is published where, a few years ago, the expedition of Mr. Nuttall found a savage wilderness. Thus, after the pioneer, come the results of an advanced civilization, and testify to the far-reaching influence of that liberty of action under a benign government which enables men, acting under laws of their own creation, to extend the circle of their influence.

#### OBITUARY.

CHARLES GUSTAVUS BISCHOF. This well-known German chemist and geologist died at Bonn, in Rhenish Prussia, on the 30th of November, 1870. According to the *Times*, he was born near Nuremburg, in Bavaria, on the 18th of January, 1792, and was educated at the University of Erlangen, where he studied chemistry and became one of the most distinguished pupils of Prof. Hildebrandt. In 1819 he was appointed Prof. of Chemistry and Technology in the University of Bonn.

Bischof was an enthusiastic geologist, and has written various works on subjects pertaining to his favorite science. That by which he is best known here, and which was translated and published by the Cavendish Society of London, is "Elements of Chemical and Physical Geology."

SAMUEL D. HENDEL, a prominent pharmacist of St. Louis, Missouri, died on the 23d of January, at that city, at the age of 39 years and 6 months. Mr. Hendel was born at Carlisle, Pennsylvania, and learned his business with the late Henry C. Blair, of this city, and graduated at the Philadelphia College of Pharmacy in 1852. He subsequently settled in St. Louis, and became a member of the firm of Leitch & Hendel. Mr. Wm. H. Crawford, of St. Louis, to whom we are indebted for information relative to the deceased, informs us that "he was much respected in that city, and known to be thoroughly posted in his business, which he conducted here for many years."

Mr. Hendel was a member of the American Pharmaceutical Association. He died suddenly at his store, of apoplexy, having had two previous attacks within two years. He leaves a widow, the daughter of Mr. Jesse Arnot.

EUGENE L. MASSOT, an eminent pharmacist of St. Louis, Missouri, died on the 14th of February, having been born in October, 1823. The following communication, from Mr. Primm, gives an idea of the public estimation in which the deceased was held:

RESOLUTIONS OF RESPECT.

At a special meeting of the St. Louis College of Pharmacy, held at Polytechnic Building, February 16th, the following proceedings were had, concerning the death of Mr. Eugene L. Massot:

The meeting was called to order by Mr. Wm. H. Crawford, and Mr. Hubert Primm was appointed Secretary. After remarks eulogistic of the deceased member's services and character, by Messrs. Alexander, Crawford and Primm, the following resolutions were unanimously adopted:

WHEREAS, the death of Mr. E. L. Massot having been announced to this College, we feel it our privilege and duty to give some expression to our deep sense of his loss and our affectionate respect for his memory. Therefore, be it

*Resolved*, That we bear most willing testimony to his faithfulness and devotion in promoting the interests of this College, he being one of its most thorough friends, who, at all times, spared no trouble and thought no labor too great to advance its interests. The records of this institution recite the confidence placed in him by its members. Filling successively the offices of President and Vice-President, he gave to each position that careful attention so necessary for the successful workings of such an institution as ours is. His blameless and consistent life, his amiable and genial disposition, and his eminently attractive social qualities, rendered his society sought for not only by members of his profession, but by all who came within the sphere of his acquaintance.

*Resolved*, That we will attend the funeral and cordially unite in every token of respect to his memory.

*Resolved*, that a copy of these resolutions be presented to the family of the deceased, and that the pharmaceutical journals of the country and the city press be requested to publish the same.

WM. H. CRAWFORD, President.

Hubert Primm, Secretary.

DR. SHERIDAN MUSPRATT. The *Pharmaceutical Journal* for Feb. 11th announces the death of this Chemist at his residence in West Darby, England, at the age of 50 years. Our space will not admit of a further notice at present.

*Advertisements omitted from the Advertiser.*

WANTED—In a drug store, doing a large and active business, a Pharmacist, acquainted with trade in the Interior Counties of this State. A graduate of the Philadelphia College of Pharmacy, who can speak German and has satisfactory references, would be preferred. Address W. S. T. This office, 145 N. Tenth street. 1 t.

WANTED—By a Graduate in Pharmacy, who speaks German, a suitable situation in a Prescription store in the South or West.

Address J. C. W., care of JAMES T. SHINN, Spruce and Broad Sts. 1 t